



Department of Corrections (DOC) Inmate Suicide Prevention Study

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Research & Evaluation



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Executive Summary—Inmate Suicide Prevention Study

This paper includes three studies associated with inmate suicide within Oregon's Department of Corrections (DOC). The first is a statistical analysis that recognizes the inmate static and demographic factors that differentiate the average inmate from the inmate who is higher risk for a suicide attempt. The second analysis identifies the inmate static and dynamic factors that differentiate the high risk inmate who does not attempt suicide from the inmate who does attempt suicide. The third study includes interviews with inmates who have attempted suicide.

Collectively, these three studies allow DOC to identify high risk inmates, identify the questions to ask high risk inmates who might attempt suicide, and provide the context for those attempting suicide. Developing protocols and systems to integrate this information into DOC's daily efforts is the final step to minimizing the number of inmate suicides at Oregon's DOC.

Identifying High Risk Inmates for Suicide

Two analyses have been performed to identify factors associated with inmates who are higher risk for attempting suicide. The most recent analysis uses five factors to quantify an inmate's risk for attempting suicide. The factors are:

- Mental health designation
- Type of housing
- Time in current cell
- Number of visits
- Race

Most inmates are considered low risk for attempting suicide. Despite quantifying suicide risk, some inmates deemed low risk will attempt suicide. Prevention of all suicides is difficult or impossible.

These risk estimates can identify higher risk inmates; the companion research identifies the factors that differentiate high risk inmates who *do not attempt suicide* from high risk inmates who *attempt suicide*. This equation, in conjunction with the companion research, is capable of recognizing the highest risk inmates for attempting suicide. Providing services to the highest risk group exhibiting certain behaviors associated with suicide will minimize the number of suicide attempts within Oregon's Department of Corrections (ODOC). The effectiveness of this research and the accompanying treatment will never be realized or quantified.

Case Review

- The case study review compared higher risk inmates who attempted suicide (experimental group) with higher risk inmates who did not attempt suicide (control group).
- One hundred and twelve inmates: 56 in the experimental group and 56 in the control group were examined. Medical and Institutional files were reviewed for each study subject.
- Inmates of all ages including male (92%) and female (8%) were included in the study.
- The variables selected for review were determined by Behavioral Health Service (BHS) professionals, psychologists, DOC psychiatrists, and researchers.

The following information portrays those areas where there was a significant difference ($p < 0.05$) between the experimental group and the control group. The information below is categorized in one of four groups:

- Questions to ask inmates when assessing suicide
- Behaviors to watch for when assessing suicide
- Requests made by inmates to not ignore
- Information to know

Questions to ask inmates when assessing risk of suicide:

- Did you attempt suicide prior to this incarceration?
- How many suicide attempts did you have during your most current incarceration?
- Have you had a recent suicide attempt (with in the last week or two)?
- Do you feel victimized?
- Have you had any recent threats of assault/victimization?
- Were you in Residential treatment as a child?
- Did you have poor peer related issues as a child?
- Have you been diagnosed or had treatment for psychological related problems prior to incarceration?
- Have you had any past hospitalizations due to psychological reasons?
- Have you had any recent dosage changes to your prescribed (controlled) medications?
- Have you had any recent significant life changes (divorce, recent/lengthy incarceration, loss of job, loss of parental rights, and/or death in the family)?
- Have you had any recent negative family interactions?
- Have you had a recent placement change (cell, unit, or institutional)?

Behaviors to watch for when assessing suicide:

- Self imposed isolation
- Crying/displaying emotional behavior
- Displaying a lack of focus
- Mentioning a desire to die
- Change in mood/behavior
- Irritability
- Expressing fear/concern for one's safety

Requests made by inmates to not ignore:

- BHS assistance
- Help for physical pain/health problems

Information to know that will increase risk of suicide:

- Special Management Unit (SMU)¹ and Disciplinary Segregation Unit (DSU) placements
- Sentence length (lengthy incarcerations)

¹ Special Management Unit (SMU) is now named Mental Health Infirmary (MHI).

- Recent attempt(s)
- Staff-controlled/prescribed medications (Particularly DSM-IV meds)
- Number of staff-controlled/prescribed medication dosage changes (DSM-IV)

Suicide Study Interviews

- Twenty-four ODOC inmates who attempted suicide in prison between 1994 and 2005 were interviewed.
- Three themes (Mental Health Issues, Relationship Issues, and Prison Factors) and sub-themes emerged in the study leading to the suicide attempt.

Mental Health Issues:

Depressive Symptoms

- Low mood
- Depressive thoughts
- Feelings of hopelessness
- Feelings of loneliness
- Feelings of guilt and/or shame related to crime

Symptoms of Anxiety

Hallucinations and/or Paranoid Ideation

Medication-Related Problems

Impulsivity

Religious Beliefs

Relationship Issues:

Relationship Problems with Family of Procreation/Partner Outside of Prison

Relationship Problems with Family of Origin/Adoptive Family

Relationship Problems with Inmates

- Not getting along
- Threats from inmates
- Physical fights

Relationship Problems with Staff

Prison Factors:

Moves within the Prison

Employment/Activity-Related Difficulties

Placement in DSU

Included are three studies. The first study (referred to as the equation) differentiates high risk inmates and general population inmates who have not attempted suicide.

The second study (referred to as the case review) compares high risk inmates who have attempted suicide with high risk inmates who have not attempted suicide. The third study (referred to as inmate interviews) includes interviews with inmates who have attempted suicide. The results from each study agree with the results from the companion studies. Any differences are noted below.

Some minor differences are apparent between the first two studies (equation versus the case study). The first study reports the number of visits by relatives and friends is uniquely associated with risk of attempting suicide. Those receiving more visits are higher risk than inmates with fewer visits. The inmate stressor “family members refuse to visit” is not associated with increased risk with the case study. This could be attributable to insufficient visiting information in the inmate case file. Another apparent difference between the two studies involves DSU placements and disciplinary action. The DSU environment clearly increases risk of suicide. The second analysis suggests disciplinary actions do not increase risk. Although some disciplinary action can be disturbing, the actions themselves do not increase risk. However, if the disciplinary action includes DSU, risk is increased. Thus, disciplinary action does not appear to increase risk although placement in DSU does increase risk.

The amount of information gleaned from case records can be limited. Often other means of collecting information is more useful. Interviewing is a time consuming technique that provides a compliment of information not provided through case reading. Few differences were found between the case study and the inmate interviews; however, five themes surfaced during the inmate interviews that were not consistently found in the inmate case records. These themes provide a complement to the case review:

- Feelings of guilt and/or shame related to crime
- Impulsivity
- Religious beliefs
- Relationship problems with staff
- Employment/activity-related difficulties

Suicide Study

Identifying High Risk Inmates

Prisons are similar to small cities. There are libraries, places to eat, exercise, get medical assistance, and socialize. The community includes the young and old, the skilled and the unskilled, educated and uneducated, the strong and the frail, and the leaders and the followers. The community also includes members burdened with mental health issues and depression. Some of these citizens will eventually feel so isolated and depressed that they attempt suicide.

The community has resources to serve those considering suicide. Family, friends, coworkers, and clergy may discuss life situations with someone contemplating suicide. Despite some similarities between living in prison and living in the community, prison life is difficult. Prisons contain more violent individuals prone to threats and physical aggression. In addition to forfeiting their freedom, inmates have limited influence on what they eat, who they visit, who they call on the phone, what they wear, where they live, and who they live with. All these uncontrollable influences affect thoughts and behavior. These influences may also affect the likelihood of self-reporting any thoughts of suicide.

Identifying individuals who are higher risk for attempting suicide is important to preventing suicide. A statistical analysis was performed to identify static and dynamic factors associated with increased risk of suicide (2005 report). The analysis included 45 inmates who committed suicide or attempted suicide between 1994 and 2005. These 45 inmates were compared to 1,000 randomly selected inmates in all DOC institutions.

Seventeen variables were considered including mental health designation, days in current cell, type of housing, marital status at intake, time remaining on their sentence, custody classification, gender, number of prior DOC incarcerations, sexual offender status, type of offense, Measure 11 versus non-Measure 11 crimes, gang affiliation, age, number of disciplinary reports, number of assault-related disciplinary reports, life/death sentence, and other variables.

There were six factors highly related to suicide – mental health designation, custody classification, days in current cell, type of housing, age, and number of disciplinary reports. Another four factors were associated with increased risk – time left on sentence, marital status at intake, number of assault-related disciplinary reports, and life/death sentence. Individuals were higher risk if they had more mental health need, were higher custody, lived in specialized housing, had recently moved to a new cell, were younger, and had more disciplinary reports. Knowing the factors associated with increased risk does little for the Correctional Officers and Mental Health Specialists working closely with inmates. Asking correctional professionals to assimilate risk information and identify those most likely to attempt suicide among the 14,000 inmates is not practical. Correctional Officers would need to recognize what factors were more important, what factors might combine with other factors to greatly increase risk, what number of risk factors constitutes high risk, and what factors may decrease risk.

An equation was developed to assess individual risk for suicide using the 17 variables considered in the analysis. This equation quantifies risk of suicide for every inmate. Inmates with higher scores are more likely to attempt suicide than inmates with lower scores. Since some factors are associated (i.e. correlated) with other factors, a different set of factors may be included in the equations than factors identified in previous analyses. The group of factors in the equation represents the fewest number of factors that most accurately identifies higher risk inmates. The following factors are included in the equation:

- *Mental health status*
- *Time at DOC*
- *Marital status at intake*

- *Custody classification*
- *Gang affiliation*
- *Time remaining on their sentence*
- *Time in current cell*
- *Type of housing*

The 2005 report entitled “Identifying Inmates at Higher Risk for Attempting Suicide” quantifies the relative influence of each factor.

Between 1994 and 2000, only those completing suicide were documented; after 2000, both suicides and suicide attempts were reported and documented. In 2008, another analysis was performed after additional inmates attempted or committed suicide. The 2008 analysis included 61 individuals who attempted or committed suicide. The 61 inmates are compared to 500 randomly selected inmates who did not attempt or commit suicide during the same period.

Method

Rare events are difficult to prevent. Most correctional professionals are not intimately involved with numerous suicides – this makes recognizing patterns among those attempting suicide nearly impossible. The many inmate groups created to better serve incarcerated offenders (i.e. mental health – 1, 1R, 2, 3, and 4; custody classification levels 1-5; housing – (Intensive Management Unit (IMU), Special Management Unit (SMU), Disciplinary Segregation Unit (DSU)) makes statistical analyses more difficult. Grouping some categories is necessary to identify offender characteristics that are more prevalent with those attempting suicide versus those not attempting suicide. A description of this collapsing process is summarized below.

Mental health categories:

<u>Category for this analysis</u>	<u>DOC codes</u>
No discernable issues	0
Some issues (codes 1 and R)	1 and 1R
Diagnosed mental health issues	2 and 3

Martial status categories

Category for this analysis

Not married
Married
Unknown or unavailable

DOC codes

Divorced, never married, widowed
Married and separated
Left blank or unknown

Race categories

Category for this analysis

Caucasian
Minority

DOC codes

White
Hispanic, African-American
Native American, and Asian

Custody classification categories

Category for this analysis

Minimum
Medium
Maximum
IMU/DSU

DOC codes

1 and 2
3 and 4
5
5

Housing categories

Category for this analysis

General population
Special housing

DOC codes

GP
IMU, DSU, SMU, and Death row

Results

There are two groups – those who attempted suicide and a random sample of inmates housed at DOC who have not attempted suicide. Below are differences between the two groups.

Mental health differences

Category

No discernable issues
Some issues (codes 1 and R)
Diagnosed mental health issues

Sample

59%
23
18

Suicide attempters

15%
20
66

Marital status differences

<u>Category</u>	<u>Sample</u>	<u>Suicide attempters</u>
Not married ²	29%	32%
Married	11	18
Unknown or unavailable	60	49

Race differences

<u>Race</u>	<u>Sample</u>	<u>Suicide attempters</u>
Minority	28%	10%
Caucasian	72	90

Custody classification differences

<u>Custody</u>	<u>Sample</u>	<u>Suicide attempters</u>
Minimum	35%	14%
Medium	39	44
Maximum	24	27
IMU/DSU	2	15

Gender differences

<u>Gender</u>	<u>Sample</u>	<u>Suicide attempters</u>
Male	92%	90%
Female	8	10

Housing differences

<u>Housing</u>	<u>Sample</u>	<u>Suicide attempters</u>
General population	92%	57%
Special housing	8	43

Average differences for quantitative variables

<u>Variable</u>	<u>Sample</u>	<u>Suicide attempters</u>
Days in cell	178	44
Visits per year	7.6	18.5
Months at DOC	49	38
Months remaining on sentence	104	111

Most differences between the random sample and those who attempt suicide are large.

Those who have attempted suicide are different than the average inmate. The most notable differences include the following:

Those attempting have more severe mental health issues
Those attempting are more likely to be Caucasian

² Not married includes divorced, never married, and widowed. The married category includes married and separated.

Those attempting are more likely to be in higher custody facilities
Those attempting are more likely to be in specialized housing
Those attempting are more recently placed in their current cell
Those attempting are more likely to have more visits
Those attempting may have less time with DOC

The characteristics listed above influence an individual's risk of attempting suicide. These characteristics can be combined into an equation to quantify any inmate's risk. The equation provides a number between zero and one for each inmate. Those scoring closer to one are greater risk for suicide; those scoring near zero are considered very low risk for attempting suicide.

The equation, the parameter estimates, and the summary statistics associated with the equation are in Appendix A. The factors associated with risk for attempting suicide are mental health status, housing, time in cell, number of visits, and race. Although other factors may be statistically related to the likelihood of attempting suicide, these five variables best quantify those at higher risk for attempting suicide.

Those identified without mental health issues are much less likely to attempt suicide (94% less likely) when compared with those with severe mental health issues. Similarly, those with minor mental health issues are also less likely to attempt suicide (78% less likely) when compared with inmates burdened with severe mental health issues.

Those in the general population are less likely to attempt suicide (87% less) when compared with those in special housing (i.e. IMU, DSU, or SMU). Those recently moved to a new cell are more likely to attempt suicide. Although risk decreases by .6% per day or 6% over 10 days, many attempting suicide have been moved to a new cell the same day of their attempt.

The number of visits by relatives and friends is uniquely associated with risk. Common speculation would suggest those with fewer visits are more likely to attempt suicide. This analysis suggests more visits are associated with greater suicide risk. This association seems contrary to common reasoning. Since many attempting suicide

become depressed and socially isolated, more visits would logically be associated with reduced risk. Sometimes data can be misleading. Suicide can reflect many life situations which occur in the days and weeks prior to a suicide attempt. Someone who attempts suicide may have dozens of visits in the first six months and no visits in the 2-3 months prior to attempting suicide. Conversely, someone with 8-9 visits may have one visit each month and have 2-3 visits in the last few months. This equation does not acknowledge changes in visiting patterns in the weeks prior to the suicide attempt. The equation only recognizes the number of visits in the last 12 months. Statistically greater suicide risk is associated with more visits.

Previous analyses and this analysis recognize that the number of days in the current cell is associated with risk of attempting suicide. The shorter time period in a cell, the greater the risk of attempting suicide.

Caucasians are more likely (64%) to attempt suicide than minorities. The increased risk associated with Caucasians could reflect cultural differences, differences in type of offense, and other factors.

Each of the 500 individuals in the randomly sampled group and 61 individuals from the attempted/suicide group have a suicide risk ranging between zero and one. The five variables in the equation are used to estimate risk for each inmate in both groups. You are higher risk for attempting suicide if you have greater mental health need, live in IMU/DSU/SMU, have received more visits in the last year, have recently been moved to a new cell, and are Caucasian. Although other variables are associated with suicide risk, these variables best estimate risk for attempting suicide.

Being high risk does not imply you will attempt suicide; other factors and circumstances influence whether someone attempts suicide. For example, there are many chronic smokers who live into their 80s and there are nonsmokers who die from lung cancer. Higher risk implies greater likelihood but higher risk does not predict someone will attempt suicide.

The companion research will help identify other issues that increase risk which are not included in the equation.

Accuracy of the equation is necessary to implement procedures to reduce risk and minimize the numbers attempting suicide. If all scoring low do not attempt suicide and if all scoring high do attempt suicide, identification of higher risk inmates is easy. With this scenario, all high risk inmates would be served prior to their attempt. In addition, low risk inmates would not receive suicide-reduction services and would not attempt suicide. In reality this equation does not completely differentiate high and low risk offenders. Some who score low will attempt suicide and some scoring high will not attempt suicide. If nearly all those not attempting suicide have lower scores than those attempting suicide, implementing a program that serves a reasonable number of inmates is possible. If there is considerable overlap of risk scores between high and low risk groups, there will be hundreds of inmates considered high risk yet very few will attempt suicide. This large number of “false positives” prohibits the effective treatment of this group.

Scores for the random group and those attempting suicide were generated. Different thresholds are identified that differentiate higher risk individuals from lower risk individuals. Most attempting suicide are closer to one on the scale and most not attempting suicide are closer to zero. Although there is a clustering of higher risk inmates near one and lower risk inmates near zero, there is a continuum between zero and one. Someone can arbitrarily establish a threshold that differentiates high and low risk individuals. This arbitrary line that separates high and low risk could be .50 or .60 or .70 or anywhere on the continuum between zero and one. If someone selects a lower threshold for inclusion, anyone scoring above the threshold would be considered high risk and anyone scoring lower would be considered low risk. With a low threshold (i.e. a low number on the continuum between 0.0 and 1.0), a great number of inmates would be considered high risk. Of those identified as high risk, only a few will attempt suicide. If this low threshold were used to provide services, many inmates would need the suicide-prevention service. If the threshold were increased (i.e. higher number on the zero-one

suicide risk continuum), fewer inmates would be considered high risk. However, increasing the threshold would move some who attempt suicide to the low risk group. The arbitrary threshold balances the number of inmates who can be served by mental health specialists and the number of inmates identified as low risk who will eventually attempt suicide. In an extreme example where the threshold was extremely low, nearly all inmates would be served and all those who will eventually attempt suicide will be provided services. Conversely, a very high threshold would serve very few inmates; however, a high number of those served would attempt suicide if services were not provided. The table below identifies the proportion currently identified using four different thresholds. An interpretation of the numbers follows.

Proportion of Inmates Considered Low and High Risk using Four Different Thresholds

Threshold	Random sample		Suicide attempters	
	<u>Low risk</u>	<u>High risk</u>	<u>Low risk</u>	<u>High risk</u>
Very low	72%	28%	14%	86%
Low	80	20	15	85
Medium	85	15	20	80
High	91	9	31	69

How do we interpret this table? The first two columns identify the proportion of high and low risk inmates in the general population. This arbitrary threshold on the zero to one risk continuum creates two categories of inmates – high and low risk for attempting suicide. If you move the threshold towards one, more inmates will be categorized as low risk and fewer will be identified as high risk. When you move the threshold very close to 1.0, nearly all inmates would be considered low risk and very few would be considered high risk. Although many in the high risk group will eventually attempt suicide without services, there are individuals scoring just below that threshold categorized as low risk yet will attempt suicide.

If DOC were to adopt a very low threshold, 28% of the inmates would be considered high risk; however, 86% of those attempting suicide would be identified as high risk.

Although a vast majority of the suicide attempters would be identified as high risk, serving that number of new inmates would be difficult. If DOC incarcerates 14,000 inmates, about 3,900 would be considered high risk using this very low threshold. Despite serving this large number of inmates, 14% of those attempting suicide would be categorized as lower risk. Thus, despite attempts to identify and serve a large population of higher risk inmates, all suicide attempts would not be prevented. If DOC raised the threshold slightly and served 20% of the DOC population, about 2,800 inmates would be served; although this threshold would serve 400 fewer inmates only an additional 1% of the attempters would be excluded from the high risk group (from 86% to 85%). If DOC adopted the highest arbitrary threshold cited in the table above, about 1,250 inmates would be considered higher risk; about 69% of those attempting would be served within the 1,250 higher risk inmates.

Providing mental health services to an additional 1,250 inmates would be difficult; however, many are currently being served by mental health services at Oregon's DOC. In addition to those provided mental health services through DOC's Behavioral Health Services, many are provided more intensive contact with DOC personnel. Many higher risk inmates are housed in specialized housing where the staff to inmate ratio is higher. Many inmates also use religious services and medical services to discuss issues. Since many of these inmates are served by other groups within the department (e.g. Chaplains, Officers in specialized housing, Contractors providing treatment services, and Counselors), dividing the workload among DOC groups may allow for more high risk inmates to be served.

Summary

Jails and prison concentrate groups of violent and troubled individuals. Daily pressures exerted by violent inmates on vulnerable inmates increase the risk of suicide. Identifying the higher risk population for suicide and knowing the factors that differentiate high risk from low risk is the first steps to preventing suicide within Oregon's prisons.

Identifying a small population of individuals involved with a rare event is extremely difficult. The statistical equation used to identify higher risk inmates is accurate yet the equation can only identify a group considered higher risk. The equation may identify 100 higher risk individuals; however, the equation cannot identify the one individual in the 100 who will attempt suicide. The companion research will identify the issues that separate high risk inmates who do not attempt suicide from high risk inmates who do attempt suicide. This research will identify the types of questions that should be asked of higher risk inmates.

DOC can implement procedures to minimize the risk of an inmate attempting suicide. Despite these efforts, some inmates will attempt suicide without being recognized as high risk. These three studies are intended to identify high risk inmates and prevent inmate suicides. The effectiveness of this effort will be difficult to detect and quantify.

Suicide Case Study Review

Oregon's Department of Corrections (DOC) provides medical and mental health services for all needy inmates. Despite these services, some inmates attempt suicide. The Oregon rate for inmate suicide is higher than the national average for jails and prisons. In addition, DOC has experienced an increasing number of suicides within the prisons.

To minimize the number of suicidal attempts occurring in a correctional facility, the higher risk offenders must be identified, be provided treatment to reduce risk, and be monitored until risk is reduced. The questions addressed with this series of research studies include the following: Can we identify inmates who are higher risk for attempting suicide? If we can identify this group of higher risk inmates, is there sufficient predictive accuracy to actually serve this group? If a higher risk group is large, does DOC have sufficient resources to serve this inmate population?

If we can identify higher risk offenders but can not limit the size of the population to a manageable number of inmates, are there other factors staff should monitor that differentiate high risk offenders who do not attempt suicide from those who attempt suicide? Are there particular issues or situations influencing the likelihood an inmate attempts suicide that are not routinely collected in DOC data systems or routinely discussed by staff and inmates?

The first study identifies demographic and static factors associated with inmates at higher risk for attempting suicide. Although the first study differentiates higher risk inmates from lower risk inmates, that analysis cannot differentiate high risk inmates who will attempt suicide from high risk inmates who will not attempt suicide. This analysis identifies the static, demographic, and dynamic factors that differentiate high risk inmates who have and have not attempted suicide.

The equation from the previous analysis identifies high risk inmates; although many inmates may be identified as higher risk, only a handful will attempt suicide. There are other life circumstances that transform a high risk inmate into someone who attempts suicide. This analysis identifies those life circumstances that move individuals from high risk to the group who attempts suicide. These factors should be monitored closely for those individuals deemed high risk.

Method

The case review section of this report examined two groups: high risk inmates who attempted suicide (experimental group) and higher risk inmates who did not attempt suicide (control group). Characteristics such as type of crime, sentence length, past psychological history, substance abuse, family history of suicide, and past history of suicide attempts were considered in this research.

Subjects

A case review was conducted on 112 inmates who were identified as high risk for suicide. There were 56 offenders³ who attempted suicide/completed suicide and 56 who did not attempted suicide. The 56 offenders who attempted suicide were matched with 56 offenders who had not attempted suicide. Subjects were matched on the following 10 variables: Mental health, IMU placement, DSU placement, date of attempt, gang involvement, marital status at intake, age at intake, ethnicity, criminal offense, sentence length, time served, and age. The variables used in the matching process were the same variables that differentiate higher risk inmates from lower risk inmates. This matching procedure allows researchers to better identify factors and conditions that may prompt high risk inmates to attempt suicide.

³ In this report the word “offender” represents those inmates in the DOC system and not those on parole/probation.

All 112 subjects used in this study had completed the intake process and some had been incarcerated for longer periods of time than others. Offenders of all ages including male (92%) and female (8%) were included in the case review. There were ten case files (some medical and some institutional) from the original sample of 122 that could not be found or were determined unavailable at the time of the case review. These ten case subjects were eliminated from the study.

Apparatus/data collection tool

An optically scanned form was developed to document information gleaned from case records (Appendix B). The variables selected were suggested by Behavioral Health Service (BHS)⁴ professionals, Psychologists, DOC Psychiatrists, and Researchers. This particular data collection tool included questions not readily available on the DOC mainframe data system.

Researchers signed confidentiality forms to ensure anonymity. Information was collected by reviewing both institutional and medical files at the institutions where inmates were housed. Permission to review sensitive institutional and medical files was provided by the institutional Superintendents and the BHS Administrator.

The following components were collected during the suicide case study:

- Demographics, such as SID number, case name, inmate job, and marital status
- Date of suicide, time of suicide, number of prior suicide attempt(s) before incarceration, dates of the last three suicide attempts, and number of suicide attempts during the current incarceration
- Time spent in DSU, IMU and SMU
- Social isolation and victimization
- History of substance abuse, legal history, and history of residential treatment
- Changes in the inmates behavior prior to the suicide attempt

⁴ During the data collection phase of this study BHS (Behavioral Health Services) was named CTS (Counseling Treatment Services).

- Visiting history, family history, and childhood history
- Psychological history, medical history, current medications, and medication/dosage changes prior to the suicide attempt

Procedure

Medical and institutional files were reviewed for each study subject. The medical files were used to collect individual medical, psychological and treatment (medications and/or counseling) information, past suicide attempts and history, substance abuse history, family history, and childhood history. The institutional files were pivotal to gathering type of crime, criminal history, visiting information, disciplinary information, housing information, institutional moves, and residential treatment history.

Most case file reviews could be completed in 1-3 hours. Data collection took place over a 7 month period. None of the study subjects were seen or interviewed during the case study review. After matching experimental and control groups, a “target date” was determined. The date of the suicide attempt was considered the “target date” for the experimental group who attempted suicide. The target date for the control group offenders was the same date as their matched twin who attempted/completed suicide. The target date for control subjects did not represent an attempt or completion of suicide like with the experimental group subjects.

Results

This section identifies differences between the experimental group (attempters and completers) and the control group (high risk but no suicide attempt). Rarely are the experimental and control groups identical, although often the two proportions may be similar. Is a difference of 50% versus 45% important? Is a difference of 50% versus 30% important? Fortunately statistical tests enable researchers to quickly identify when two proportions are different. A statistic known as the Chi-square recognizes when the two

groups are considered different. If the Chi-square is not significant (p-value larger than 0.05), the experimental group and the control group are the same for that factor. If the Chi-square statistic is significant (p-value between 0.00 and 0.05), those who have attempted suicide are considered *different* from the high risk group who did not attempted suicide.

Information gleaned from case records are categorized into three groups:

- *Significant difference*: the high risk individuals who attempt suicide are different from the individuals who do not attempt suicide.
- *Difference*: the two groups differ, but differences tend to be smaller/marginal (p-value between 0.05 and 0.15).
- *No difference*: the two groups are the same—the proportion for each group are similar or identical ($p > 0.15$).

Questions reflecting significant difference ($p < 0.05$) between the high risk offenders who attempted/completed suicide (experimental group) and the high risk offenders who did not attempt suicide (control group):

- **Suicide attempts *prior* to incarceration⁵.**

The experimental group (68%) had one or more suicide attempts (prior to their current incarceration) when compared to the control group (32%).

- **Suicide attempts *this* incarceration.**

The experimental group (50%) had one or more suicide attempt during their current incarceration when compared to the control group (13%).

- **Did the offender spend time in DSU or SMU in the month prior to the target date?**

SMU placements are more prevalent for experimental group offenders when compared to control group offenders (29% versus 11%). More experimental

⁵ Bold face bullets represent the questions/topics collected during the case study review.

group offenders (16%) spent time in DSU (1-7 days prior to the target date) when compared to the control group offenders (7%).

- **If the offender was in general population during the target date, was the offender socially isolated?**

Nearly 20% of the experimental group offenders and less than 2% of the control group offenders had documented evidence of social isolation. Self imposed isolation (by the offender) was the most common form of social isolation.

- **Any evidence this offender was feeling victimized?**

Over one-quarter of the experimental group and fewer than 5% of the control group offenders felt victimized. Victimization was documented in the case record prior to the suicide attempt/target date.

- **Was there a history of this offender being in residential treatment as a child or adolescent?**

Nearly 40% of the experimental group offenders and 18% of the control group offenders had a history of being in residential treatment.

- **Offender's psychiatric history prior to incarceration.**

Just under two-thirds of the experimental group and 41% of the control group had a past diagnosis and treatment for psychological issues. Past hospitalizations due to psychological reasons was also more prevalent among the experimental group offenders when compared to the control group offenders; 39% and 21% respectively.

- **Documented changes in the offender's behavior 1 to 2 weeks prior to his/her target date.**

Crying/displaying emotional behavior (50% versus 13%), displaying lack of focus (36% versus 11%), significant life changes (25% versus 4%), mentioning a desire to die (22% versus 5%), and requesting BHS (Behavior Health Services) assistance (17% versus 4%) were behavior changes found to be more common with the experimental group.

An “other” change in behavior was found in over half of the experimental group cases when compared to only 11% of the control group cases. The most prevalent “other” behavioral changes include change in mood/behavior, anxious/depressed mood, irritability, placement change (cell, unit, or institutional), fear/safety issues, negative family interaction, and requesting help for physical pain/health problems.

- **Stressors the offender was dealing with 1 to 2 weeks prior to the offender’s target date.**

Lengthy incarceration (64% versus 43%), recent suicide attempt (23% versus 2%), threat of assault or victimization (16% versus 2%) are stressors impacting more experimental group offenders when compared to the control group.

- **Family or childhood stressors.**

Poor peer related issues as a child (46% versus 23%) and residential treatment (25% versus 7%) are family/childhood stressors more common with the experimental group when compared to the control group.

Medications taken by study subjects were also considered. Medication changes for both in-cell and staff-controlled medications, dosage changes, as well as DSM-IV (mental disorders) and ICD-9 (medical/physical related problems) medication usage were examined. Medication differences between those attempting and those not attempting are listed below.

- **Was the offender on any medications at the time of the target date?**

Staff-controlled medications tend to be more commonly prescribed to the experimental group (86%) when compared to the control group (57%). Anti-epileptic (25% versus 9%), gastrointestinal (20% versus 7%) anti-bacterial (18% versus 9%), and anti-depressant medications (18% versus 9%) tend to be prescribed more to the experimental group offenders when compared to the control group offenders.

- **DSM-IV⁶ medication changes 3 months prior to the target date.**
The proportion of experimental group offenders taking DSM-IV staff-controlled medications is more than twice that of the control group (45% versus 20%).
- **Dosage changes 3 months prior to the offender's target date.**
The experimental group offenders (45%) have more staff-controlled medication "dosage" changes when compared to the control group (20%). Experimental group offenders tend to require more dosage changes to their anti-depressant medication when compared to the control group (18% versus 5%).

Questions reflecting a marginal difference (p-value is between 0.05 and 0.15) between the high risk offenders who attempted/completed suicide (experimental group) and the high risk offenders who did not attempt suicide (control group):

- **Was the offender diagnosed with a DSM-IV mental disorder at the time of the target date?**
Eighty-six percent of the experimental group offenders and 70% of the control group offenders had a DSM-IV diagnosis at the time of their suicide attempt (target date for the control group). The diagnosis for "personality disorder" was slightly more common with the experimental group (25% versus 13%). There was no significant difference between the two groups for all other DSM-IV mental disorders.
- **Stressors the offender was dealing with 1 to 2 weeks prior to the target date.**
Loss of privilege significant to the inmate (18% versus 7%), debts (14% versus 5%), and severe guilt over alleged offense (13% versus 4%) tend to be stressors slightly more common with the experimental group when compared to the control group.

⁶ The Diagnostic and Statistical Manual of Mental Disorders, 4th Revision

- **Family or childhood stressors (marginal difference).**

Oregon Youth Authority (OYA)/detention (32% versus 20%), step child (23% versus 7%), and abandoned as a child (16% versus 7%) are childhood stressors only slightly more common with the experimental group when compared to the control group.

- **ICD-9⁷ medication changes 3 months prior to the target date.**

Forty-three percent of the experimental group offenders and 20% of the control group offenders *did not* have an ICD-9 medication change three months prior to the target date.

Questions reflecting no difference (p-value is >0.15) between the high risk offenders who attempted/completed suicide (experimental group) and the high risk offenders who did not attempt suicide (control group):

- **Did the offender spend time in IMU in the month prior to the target date?**

There was no difference between the experimental group and the control group for IMU placements.

- **What was the level of alcohol and/or substance abuse issues related to this offender?**

No significant difference was found between the two groups for drug and alcohol abuse issues:

⁷ The International Classification of Diseases, 9th Revision

<u>Drug/Alcohol History</u>	<i>Experimental Group</i>	<i>Control Group</i>
Past history, drugs only	13%	16%
Past history, alcohol only	9	13
Past history of both D/A	71	61
Current use, drugs only (+UA)	5	4
DR for Pruno/alcohol	4	0
No current or past history	7	11

- **Stressors the offender was dealing with 1 to 2 weeks prior to the target date.**

No significant difference was found between the two groups for the following stressors:

<u>Inmate stressors one to two weeks prior to the target date</u>	<i>Experimental Group</i>	<i>Control Group</i>
Recent entry into DOC	9%	9%
Detainer (County, State, Federal)	5	4
Personal loss/death	20	13
Marital breakup/divorce	9	5
Family members refuse to visit	16	9
Gang related issues/difficulty with gang activity	0	2
Disciplinary action	32	30
Physical illness	25	18
Intoxication	0	4
Anxiety due to closeness to release	4	4
Recent court appearance	2	2
Loss of “good time”	0	2
Change in work status	4	0

- **Family or childhood stressors.**

No significant difference was found between the two groups for the following family/childhood stressors:

<u>Family or Childhood Stressors</u>	<i>Experimental Group</i>	<i>Control Group</i>
Divorced parents	43%	34%
Poor family relations	54	54
Sexually abused as a child	32	27
Physically abused as a child	29	21
Neglected as a child	11	14
Emotionally abused as a child	32	28
Foster child	11	11
Adopted child	4	4
Suicide attempts within the family	16	9

Summary

The information gathered from this particular case study considered factors not readily found on the ODOC data system. Researchers used inmate institutional and medical case files to retrieve more in depth information. The questions reviewed during the case study fell into three distinct categories: questions where significant differences were found between the experimental group (high risk individuals who attempt/complete suicide) and the control group (high risk individuals who do not attempt/complete suicide), questions where there is a marginal difference between the two groups, and questions where there is no difference between the two groups.

The questions where significant difference was found between the two groups are the areas where more attention should be considered when assessing risk for suicide. The following includes a summary of those areas. Experimental group offenders had more prior suicide attempts (68% versus 32%) and more suicide attempts during their most current incarceration (50% versus 13%) when compared to the control group. The experimental group tends to spend more time in SMU (29% versus 11%) and spent more time in DSU (1-7 days) prior to their suicide attempt (16% versus 7%). However, the difference between the amount of time spent in IMU (7% versus 2%) was not huge between the two groups. The experimental group offenders tend to be more socially isolated (20% versus 3%) and feel more victimized (27% versus 4%) when compared to the control group offenders. Being in residential treatment as a child/adolescent (40% versus 18%) and having a history of psychiatric care prior to incarceration (63% versus 41%) are also more common factors with the experimental group offenders.

Requesting BHS assistance, crying/displaying emotional behavior, displaying a lack of focus, a significant life change, and mentioning a desire to die are behavioral changes (exhibited by the offender one to two weeks prior to their attempt) impacting more experimental group offenders. Lengthy incarceration, recent suicide attempt, and threat of assault/victimization are more common stressors with the experimental group. These offenders are also prescribed more staff-controlled medications when compared to the control group. In addition, the experimental group offenders are prescribed more medications related to mental disorders and get the dosage changed on their medications more when compared to the control group (45% versus 20%).

It is difficult to predict who is at higher risk for attempting/completing suicide. Correctional staff members (Correctional Officers, Chaplains, Mental Health Specialists, and DOC Captains) are often burdened with determining what offenders are at risk for suicide. The above research was conducted to assist DOC employees in making more informed decisions regarding who is at risk for attempting/completing suicide in prison.

Suicide Study—Interviews

Running head: SUICIDE IN PRISON: A QUALITATIVE STUDY

Suicide in Prison: A Qualitative Study

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Abstract

Suicide is an important cause of death in prisons across the United States. Existing research on prison suicides has been criticized for focusing on static variables such as demographics. The purpose of the present investigation was to study the experiences of inmates who attempted suicide in prison in order to shed light on factors associated with the suicide attempts. Twenty-four inmates were interviewed in six state prison facilities in Oregon. The results were organized into three categories: mental health issues, relationship issues, and prison factors. In the present article, the themes and subthemes of each category are illustrated with quotes and results are discussed in the light of relevant literature.

Suicide in Prison: A Qualitative Study

In the United States, suicide is two times more common among prison inmates than in the general population (Kupers, 1999). Approximately 200 prison suicides occur in this country each year (Gater & Hayes, 2005), and suicide is the third leading cause of death in prison, after natural causes and AIDS (Hayes, 1999). Prior authors have predicted that the rate of suicide in prisons would grow due to new mandatory sentencing laws, increase in the rate of incarceration, increase in the number of life sentences and death penalties, overcrowded correctional facilities, increased prevalence of AIDS, and the aging of the inmate population (Haycock, 1991). Additionally, the trend of deinstitutionalizing mental health patients after 1963 and societal trends of migration and loss of traditional social networks (Westermeyer, 1987) have led to a greater proportion of incarcerated individuals with mental health problems, including those at risk for suicide. For example, in New York state correctional facilities, there was an increase from 13% to 24% of inmates with mental health needs between 1991 and 1998 (Kovaszny, Miraglia, Beer, & Way, 2004). In California, in 2005, the number of state prison suicides increased from 26 to 44 cases from the year before (Dannenberg, 2006).

Suicide rates may be higher than statistics show, due to a tendency to underreport such incidents. For example, many suicides are categorized as accidental deaths (Danto, 1973). Staff at some facilities may choose not to report some deaths as suicides for fear of litigation and, if an inmate dies in the hospital following a suicide attempt, records may not indicate that he or she died in the prison (Daniel, 2006). Hayes (1989) stated that during 1981 and 1982, only 22 inmates were reported to have been victims of suicide in Ohio penal institutions, when in fact an examination of hospital death certificates showed

that 46 inmates took their own lives during this period. Furthermore, Kupers (1999) contended that certain escape attempts, engagement in physical fights with an armed guard or a tough prisoner, and failure to pay off a drug dealer or a gambling debt may constitute “invisible suicides” (p. 179).

Suicide is a recognized problem in U.S. jails, where over 400 inmates commit suicide in a year; however, prison suicides have not received comparable attention (Hayes, 1995). One reason for the lag between prison and jail research is the assumption of many researchers that the risk for suicide dissipates in prison as inmates adjust to life behind bars. Hayes characterized this assumption as simplistic and lacking in empirical validation.

Hayes (1995) observed that the majority of research on custodial suicide has been retrospective and descriptive, characterizing suicide as a “static, isolated event that is simply associated with other static factors (e.g., demographics)” (p. 4). Along those lines, Way, Miraglia, Sawyer, Beer, and Eddy (2005) noted that a great deal of suicide research conducted in prison has been focused on calculating and comparing suicide rates. Similarly, Liebling (1999) stressed that prison suicide researchers have largely ignored the affective understanding of prisoners in favor of reliance on records. Additionally, studies of suicide statistics have often yielded unreliable results due to difficulties establishing appropriate comparison groups (Way et al., 2005) and limitations of recorded information, such as bias in and incompleteness of the data (Liebling, 1993). Liebling also noted that inmates’ understanding of their suicide attempts differ from accounts recorded in prison files. Retrospective and descriptive studies fail to describe the process by which inmates decide to take their lives (Hayes, 1995). In this regard,

“quantitative data are only capable of capturing a portion of the reality. Interviews would provide a glimpse into the minds of inmates who attempted suicide, providing explanations that mere numbers are unfit to describe” (Winter, 2003, p. 143).

The above critiques suggest that the affective component and process of suicide could be more effectively studied by direct interviewing of inmates. However, such qualitative studies are scant, and the majority have been conducted in countries other than the United States. The purpose of this study was thus to investigate through interview the experiences of inmates who engaged in serious suicide attempts in one U.S. prison system (in Oregon). Attempts that would have been life-threatening without medical intervention qualified as serious attempts.

Within the last 12 years, the yearly rate of suicide in Oregon state prisons has fluctuated between 0 to 20 cases (Williams & Bellatty, 2005). Oregon Department of Correction (ODOC) liaisons requested this qualitative study in order to obtain information to assist them in reducing the number of suicides in Oregon correctional facilities. In this study, our aim was to contribute to the knowledge base about factors associated with suicide in prison. No preconceived hypotheses were formulated because we hoped to identify factors not yet identified in the scientific literature in addition to validating factors already identified by other researchers. Inmates were also asked to make recommendations, based on their experiences, about ways to better prevention programs at ODOC or other correctional facilities.

Method

General Considerations

Every suicide attempt is an individual event shaped by a myriad of unique circumstances. Qualitative research has the capacity to capture such details that may lead to suicide attempts. We relied on a phenomenological method applying the following features: recognizing the value of qualitative research in the studying a human experience, focusing on the wholeness of the experience rather than on parts, searching for meanings rather than measurements, regarding experience and behavior as inseparable, and obtaining descriptions of first-person experiences (Moustakas, 1994).

Because narrative truth may be different from historical truth (Lieblich, Tuval-Mashiach, & Zilber, 1998) inmate accounts of the suicide attempts given during the interviews were compared with the inmates' mental health files. This seemed an important step due to the potential for falsifying information that exists in a correctional setting (Daniel, 2006). Comparison of the data confirmed that all inmates had provided the same basic information about their suicide attempts that were described in their charts.

Definition of Suicide Attempt

The ODOC definition of suicide attempt was adopted, which includes five types of behaviors (ODOC: Counseling and Treatment Services Corrections Program Division, 2005): (a) hanging that leaves ligature marks or unconsciousness, (b) cutting that requires sutures, (c) overdose on medication or other toxic substance that requires stomach pumping or other medical intervention, (d) drowning that requires medical intervention to remove fluid from lung or resuscitate, or (e) other behavior that involves significant risk with intent to harm self. I defined suicidal ideation as thoughts involving a wish to die, with or without a plan to kill oneself.

Participants

The target population consisted of ODOC inmates who had attempted suicide in prison between 1994 and 2005; however, in the final sample all participants had attempted suicide between 2004 and 2005. Changes in prison policies regarding recording of suicide attempts influenced the availability of inmates for this study. Nonetheless, when inmates indicated that they had attempted suicide on occasions before or after the target dates, we gathered information about those attempts as well (some of which occurred prior to 2004). The potential participant pool resided in six facilities of the ODOC in the General Population, the Disciplinary Segregation Unit (DSU), or the Intensive Management Unit (IMU). The General Population consists of inmates who are not in segregation, protective custody, or medical units. The DSU is often referred to by ODOC personnel as the “prison within prison;” inmates who do not comply with rules can be held in this unit. Inmates who consistently disobey rules can be held in the more restrictive environment of the IMU.

A list of inmates who attempted suicide between 1994 and 2005 was provided by a prison liaison. The 32 inmates were asked by their case managers to participate in the research project. The case managers described the study to the inmates based on the Consent Form, answered questions, and asked inmates to sign the Consent Form if they agreed to participate. Participation was completely voluntary; no benefits were provided to participants, and refusal did not result in any penalty or loss of rights to which inmates were entitled. Participants could also withdraw from this study at any time without penalty or loss of benefits.

Of the possible participant pool, 4 inmates refused to participate and another 4 inmates were not available due to other circumstances such as unstable mental health condition or recent parole. The final sample consisted of 24 inmates who had attempted suicide in prison and were currently incarcerated in an ODOC facility. All 24 participants were able and willing to discuss their experiences related to their suicide attempts. Three participants were female, the rest were male. Except for one male and the female inmates, who were placed in medium-security facilities, the rest of the participants resided in maximum-security buildings.

Participants' ages ranged from 21 to 53 ($M = 31.83$; $SD = 1.01$). Based on prison identifiers, most participants were White ($n = 22$) and 2 were Hispanic; however, during the interviews 5 individuals listed as White identified themselves as biracial with Native American identity and 1 as biracial with Asian identity. Their religious beliefs at the time of the interview were reported to be the following: Christian ($n = 8$), Native-American/Christian ($n = 5$), Atheist ($n = 3$), Jew ($n = 2$), Buddhist ($n = 1$), Hare Krishna/Christian ($n = 1$), Sufi/Christian ($n = 1$), Wiccan ($n = 1$), and unknown ($n = 1$). Reported sexual orientations and identities were as follows: heterosexual ($n = 19$), bisexual ($n = 3$), unknown ($n = 1$); and transgender ($n = 1$) respectively. Most individuals had at least one psychiatric diagnosis, the most frequent one being Major Depressive Disorder. The range of time served at the time of the interview was 1 to 24 years. The range of remaining time to serve was 3 months to life. Criminal charges included driving under the influence of alcohol, delivery or manufacture of controlled substance, burglary, robbery, unauthorized use of a firearm, assault, kidnapping, sexual abuse, sexual penetration, sodomy, and murder.

None of the participants reported current suicidal ideation during the interview. However, all interviews were followed by a counseling session with the respective case managers to process the inmates' experiences during the interviews to ensure that no suicidal ideation had been induced during or immediately following the interview.

Procedure

The data gathering method was an in-depth personal interview. As noted above, we obtained inmates' written consent to participate through their case managers several days prior to the interview. Each interview began with the principal investigator presenting the purpose of the study, discussing the informed consent the inmate had already signed, and obtaining the oral consent of the participant to proceed with the interview. The interviews were 40 min to 2 hr long, depending upon the participant's responses.

A semi-structured interview format was used. The questions were developed to obtain a thorough description of factors leading up to the inmates' suicide attempts, including perceptions about the current suicide prevention system of ODOC. The majority of the questions were open-ended (e.g., What did you do to harm yourself?). Additional questions were asked if the client did not give detailed explanations to the main question (e.g., Were you on suicide watch at the time?) or to clarify content (e.g., Was that person a friend or just another inmate?). All interviews were audiorecorded.

Data Analysis

The interviews were analyzed using Lieblich, Tuval-Maschiach, and Zilber's (1998) holistic-content perspective. According to this method, the material was read several times to obtain an understanding of the whole and patterns in the stories. The next

step consisted of grouping the quotes of each participant based on similarity of content. Then the grouped quotes were compared and similar subthemes were identified. Then the subthemes were grouped into larger categories, identified as themes. Based on the themes, general categories were constructed. Only themes and subthemes that appeared at least five times across the interviews were included in the findings.

For validation purposes, triangulation was used to corroborate findings. A coding partner conducted a theme analysis for three interviews as a cross-validation procedure and we had input from members of a research group. Additionally, the method of thick description was also employed, such as providing numerous quotes and negative case analysis by looking for disconfirming evidence to support the authenticity of the findings.

Results

Three categories with several themes and subthemes emerged in the study of reasons leading up to the suicide attempts: mental health issues, relationship issues, and prison factors (Table 1). The boundaries between categories were somewhat fluid due to the complexity of the processes that led to suicide attempts. Individual factors, for example, were intrinsically intertwined with the other categories. A relationship problem would often lead to feelings of hopelessness, an individual factor. However, individual factors appeared to warrant a category by themselves because many inmates indicated experiencing feelings of hopelessness periodically without obvious external causality and

Table 1

Categories, Themes, and Subthemes of the Interviews

Categories	Themes/Subthemes
Mental Health Issues	<p>Depressive Symptoms</p> <ul style="list-style-type: none"> • Low mood • Depressive thoughts • Feelings of hopelessness • Feelings of loneliness • Feelings of guilt and/or shame related to crime <p>Symptoms of Anxiety</p> <p>Hallucinations and/or Paranoid Ideation</p> <p>Medication-Related Problems</p> <p>Impulsivity</p> <p>Religious Beliefs</p>
Relationship Issues	<p>Relationship Problems with Family of Procreation/Partner Outside of Prison</p> <p>Relationship Problems with Family of Origin/Adoptive Family</p> <p>Relationship Problems with Inmates</p> <ul style="list-style-type: none"> • Not getting along • Threats from inmates • Physical fights <p>Relationship Problems with Staff</p>
Prison factors	<p>Moves within the Prison</p> <p>Employment/Activity-Related Difficulties</p> <p>Placement in DSU</p>

also because most inmates in prison do not experience significant feelings of hopelessness and adapt relatively well to prison life without attempting suicide. Similarly, relationship issues involving inmates reflect difficulties in interpersonal functioning, but they are also related to prison factors.

Mental Health Issues

Theme 1: Depressive Symptoms

Five subthemes were identified within the theme of depressive symptoms: low mood, depressive thoughts, feelings of hopelessness, feelings of loneliness, and feelings of guilt or shame related to crime. Given that depression has been found to be the best predictor of inmate suicide (Rowan & Hayes, 1988), it is not surprising that several subthemes could be identified within this theme.

Low Mood. Most of the participants indicated that they had a depressed mood prior to their attempts. Some inmates reported this state in very simple language. For example, one participant said, “I just didn’t feel right.” Another inmate indicated: “All my attempts were around the same type of feeling. I probably felt depression, despair, despondency.” A third participant said:

I got to a point where I just got so low, depressed, and it was just that point where...it’s like there’s a pit and you fall into it. And it’s just darkness. And you are trying to get out but you can’t. Hands are pulling you back down.

Depressive Thoughts. Inmates tended to ruminate on a variety of topics, such as inadequate parenting skills, letting family down, negative self-evaluation, and the state of the world. For example, one participant believed that he had let his family down by his

incarceration: “Just my incarceration: leaving my family behind, my mom and my sister. For them to come up and see me in blue, having to see them leave. It was just real hard on me at that time.” Another participant was distressed over her past parenting:

And that’s another reason why, because I haven’t been a mother to my children. They lived with their daddy. And my oldest son, he was in M. with my aunt. I never took care of my kids (*sobs*).... then my daughter told me that S. my son, was mad at me because I’m in prison again, I got locked up again.

Feelings of hopelessness. A great number of participants reported feelings of hopelessness. This was described by some participants as encompassing all areas of their lives, whereas others linked the feelings to specific circumstances. One participant explained: “I felt I was done. I’ve done of life as much as I could possibly do. I felt at the very end. At that moment I felt like I couldn’t do anything anymore.” A second participant indicated that his hopelessness was related to his fear of dying in prison, “I didn’t want to die in here. I’ve seen people die in here. I just didn’t see a life for myself anymore.” Another inmate explained,

I mean after five times, it’s like, you’d think I get it right, you know.... I was so sick of being here and coming back again (*sobs*). And I am so sick of this. I was like, “When it is going to stop?”

Feelings of loneliness. Several participants reported that feelings of loneliness were a significant factor in their suicide attempts. Most of the inmates who expressed such feelings said that they felt isolated from both the outside world and within the prison. These feelings were related to relationship difficulties; however, in many cases inmates felt lonely despite communicating with other inmates and family members, and

thus this subtheme appeared to be more a part of depressive symptoms than of relationship issues. One participant observed:

Nobody is keeping in touch. That's the main thing about depression in prison, being alone. Here in prison you're alone, you don't have nobody. I tussle myself all day long; that's the only person I got. Sometimes...I would not wish it to my worst enemy I guess, you know what I'm saying?

Feelings of guilt and shame related to crime. Several interviewees indicated that the crimes for which they served time haunted them so badly that it contributed to their suicidal ideation. For instance, one participant said:

I was my own worst enemy.... fear of shame, should nature of crime come out.... I grew up in the woods pretty much out in [a rural area]; physical pain is normal for me. I don't, you know, I don't really worry about it. I wasn't scared of getting in a fight or something. I was scared of people knowing what I have done. That's way worse than any physical pain that they could cause.

Theme 2: Symptoms of Anxiety

Inmates reported different reasons for worrying. As an effect of institutionalization, some inmates reported feeling anxious because of their upcoming release. One inmate reported that his anxiety built up over small matters. Another inmate indicated feeling afraid of threats received from other inmates: "Maybe I should just kill myself so they won't kill me." One participant said he felt anxious when he witnessed unwanted sexual behavior from his cellmate. One physically male inmate's specific anxiety stemmed from a fear of not wanting to appear masculine which was related to his (her) female gender identity.

Theme 3: Hallucination and/or Paranoid Ideation

Several participants reported experiencing hallucinations and paranoid ideation. For example, a participant described his auditory and visual hallucinations in the following way:

They are familiar voices from people that I used to know in the past, from people that abused when I was younger, a child. So when I start hearing these voices I start losing control a lot quicker.... I would see things like blood coming out of walls. I would see faces in the windows like angry demon type faces which made me... freaked me out, scared me. And I couldn't, didn't really want to talk with nobody about it.... At that time, I was believing that it was right there because it seemed so real. And now I can say that I can know now that it was not real but back then it seemed real.

Theme 4: Medication-Related Problems

Some participants indicated that their feelings of depression were connected to a lack of psychotropic medications or of consistency in taking them. One of the inmates indicated:

And at the time I was getting my meds, I was getting a variety of medications and I've checked them. I went back to my cell and I spit them out. And I could either trade them for coffee or trade them for a pen or trading for whatever. So I had a stockpile.... I would take some and I would keep some, like a squirrel, ok?

Theme 5: Impulsivity

Even though most inmates realized that a series of events and circumstances led up to their suicidal ideation, many also recognized they had decided to kill themselves

impulsively, often within an hour of a triggering event. One participant mentioned, “One minute I was just so depressed I couldn’t deal with it anymore. That was another thing: I was always the person of the spur-of-the-moment, spontaneous person.” Another interviewee indicated, “I wasn’t thinking at that time at all. It all just happened within an hour.” A third participant observed, “I was in a hurry, more in a hurry than usual. I wanted to hurry up and get over with. I was almost anxious to be done with all things.” Another inmate explained:

It was just kind of, it was really a spontaneous thing.... I think that night was like, just felt like right now I am not feeling okay and right now is the point where I am going to go and do something to...you know?... to do something to myself because it didn’t feel like in that moment that I was getting help and I that I was getting support and that I’d be like that forever. It just felt like [that], you know.

Theme 6: Religious Beliefs

Religious beliefs played both a protective role and a risk role in the suicide attempts of the inmates. Religious beliefs ultimately saved the life of one participant; he called for help before losing his consciousness: “If I kill myself I’m not going to go to heaven. That’s what stopped me the last minute.” However, for another participant, the belief in suicide as a sin did not serve as a protective factor. Having earlier talked somebody out of killing himself, he believed that this action freed him to take his own life. Another participant experienced disillusionment in faith which ultimately contributed to his decision to kill himself:

And the reason why [an officer] was saying [to go back to my cell and wait until tomorrow after I requested to be moved] was because I was carrying the Bible and

stuff. I took this as guidance from God and I went back up to the cell. And [my cellmate] got mad, but he really didn't say anything, you know, I thought maybe something might happen. So I did what I was supposed to and that's put my faith in God, and, you know, I was positive nothing's gonna happen. I got beat up pretty good.

One of the inmates reported having Buddhist beliefs. He claimed that he attempted to kill himself for the greater good of humanity. That is, he believed that killing people causes bad karma; therefore, he had decided to avoid getting killed by someone else (who therefore would incur negative karma) by committing suicide, which causes less bad karma than homicide:

I felt like if I remained in that environment my life would be terminated by them and I did not want to be a source of negative karma for them.... I can be sure that neither one [of my attempts] was induced by emotional reasoning. It was induced by some form of logical reasoning even if it was relatively twisted.... [Suicide is] negative, but that's less of a negative than what they would get. One has to show more concern for brothers than oneself.... The only way that we can truly help all is by being more compassionate for others than oneself. We should have absolute compassion for all, no matter what their intentions are for us.

Relationship Issues

Four themes emerged in the relationship issues category: relationship problems with family of procreation/partner outside of prison, relationship problems with family of origin/adoptive family, relationship problems with inmates and relationship problems with staff.

Theme 1: Relationship Problems with Family of Procreation/Partner Outside of Prison

Several inmates indicated that the loss of their intimate partner outside of prison had contributed to their suicidal ideation. One participant said:

I believe it was my girlfriend leaving me. She had her daughter getting on the telephone telling me that she had a new boyfriend. She didn't have the heart enough to get on the phone and tell me and it really pissed me off. So I believe that was the last straw that did it.

One participant stated he missed his wife, and several interviewees said they missed their children. For example, one explained, "My kids mean so much to me. You wouldn't know because I put myself in here, it seems such an oxymoron, but I hadn't seen them."

Theme 2: Relationship Problems with Family of Origin/Adoptive Family

Several problems were reported regarding families in which participants grew up. One participant indicated that a physical health problem in his family added to depression that fueled his suicidal ideation prior to his attempt: "What was going on at that time is that my mother had just lost her vision." Another inmate stated she felt that her verbal fight with her mother the night of her attempt was the last and most important event that triggered her suicide attempt:

I was having a lot of problems with my mom, like fights with my mom.... My mom comes to see me once every two months and we usually don't fight when she comes but that month had been particularly hard. So I call her once a week. And we'd fight over the phone a little bit more than we would when she came to see me in person. And, it was more about money and just about me asking her for

things and being needy, because I was. You need things in here and you don't really have anybody to ask except for her. Then it just kind of just escalated to the point where she was yelling at me about it and I just really got under the weather.

Theme 3: Relationship Problems with Inmates

The themes that emerged in this area of relationship problems with inmate were not getting along, threats from inmates, and physical fights.

Not getting along. Several inmates complained about an inability to fit in with other inmates. One participant reported: "Some of them played little games, like you can't pass a magazine, or you can't loan some of your soup, you can't get ice at a certain time. They nitpick at you until you flip out on them." One participant felt he could not get along with other inmates: "I was having a lot of trouble with a lot of people. A lot of people didn't like me. I don't know why because I never really had any guy-friends. Never."

One participant explained why he believed he did not fit in the following way:

If we were on the streets right now, all of us, no one would care about our past.

Here is like a past-consuming place. It grabs your past, it brings it forward and it says: "Look what I've found! Guess what, I don't like you because your past is not what I think it should be."

Threats from inmates. Eight inmates indicated they had received threats of physical violence prior to their suicide attempts. One participant explained his circumstances the following way:

Basically in here it doesn't matter whether you told on them or not, if you told on anybody, they consider you a snitch quite and simple, which puts me in about the

same boat as a sex offender.... They've tried to extort me, they've tried to make me do stuff for them, make me beat people up for them. And when I said no, they sent someone after me.... No matter how many of these guys I fight, no matter how many I beat up, they just keep on coming. They never stop.

Another participant commented:

One group of people at the institution, who made it clear that they would prefer to see me in a form of a corpse.... I felt like if I remained in that environment my life would be terminated by them.

One participant indicated he received threats for being a “rat,” telling on other inmates: “‘I wouldn’t want to be in your bunk tonight.’ They come by and say that as a welcome pass.”

Physical fights. Besides the threats, the toll of physical fights further added to the stress level of the inmates who later attempted suicide. One participant recalled:

I might be tough mentally, not really.... It’s like you gotta beat someone up to prove your point. I don’t like beating up people. I’ve been in 13 fights since I’ve been down. That’s a lot of fights. I haven’t lost that many, because when you’re scared your adrenaline gets built up and you don’t feel all of those punches hitting you and the kicks hitting you, you just go with it. But afterwards you realize that was pretty scary.

Theme 3: Relationship Problems with Staff

Relationship problems with staff predominantly involved officers. One participant indicated he felt he wanted to show that he—and not the officers—had the ultimate control over life:

I don't know, maybe I felt like I proved a point to them that they cannot control me. Or they can't have every single part of me, you know. I have my own free will to do, if I choose to, to do whatever I want, you know.

"Getting back" at mental health personnel was a theme in some other inmates' attempts as well. Another participant stated:

I see a lot of angst among inmates about them reporting they feel suicidal and not being taken seriously and then doing it. That's an observation, that's something that I've seen. It makes them more suicidal. It makes them, "You won't believe me? Fine. I'm going to do it. You don't care." It's the mode you go into. As a matter of fact, that's the mode I went into on [date]. I've told them I felt suicidal and I was a 5 on suicidality, and I needed help.

Prison Factors

Themes that emerged in this category were moves within the prison, employment/activity-related difficulties, and disciplinary reports.

Theme 1: Moves within the Prison

Some inmates found that a transfer within the institution (such as from a single cell to a dorm housing) or to different institutions led to feelings of depression and reported that it was a contributing factor to their suicidality. For example, one participant indicated, "[This] is unlike any institution probably I have ever been to: very strict, very depressing. It's just like being in a dungeon; really, it's a lot more depressing."

Theme 2: Employment/Activity-Related Difficulties

One participant felt that her job was more stressful than what she could handle: "The load was just so overwhelming to me there. It was just like, 'What do I do with this,

how do I talk to somebody about being...just being overwhelmed?' because nobody...I was like, 'Nobody will understand'."

By contrast, some other inmates thought that for them unemployment was a contributing factor to their suicidal ideation. Some of participants believed that boredom might have been an important factor that contributed to their suicide attempt in prison. One participant said: "I'd lay in bed at night and I'd say I have nothing else to do but think." Another indicated:

I realized that a lot of what was causing my depression was sitting around and having nothing to do. Once it gets quiet and late at night, I start thinking about stuff, so I told myself I had to have something outside of that.

Theme 3: Placement in DSU

Placement in DSU, or the "hole," is often a punishment for misbehavior in prison. Such placement involves a change in housing, more restrictive conditions of living, and a possible loss of previously earned privileges. Inmates placed in DSU often had a particularly hard time adjusting to the new conditions, which in turn led to deterioration in mental health. One participant started experienced paranoid ideation in DSU:

I started hearing voices and just losing control of my own thoughts.... I have problems hearing voices and visualizing hallucinations.... I had them for a long time. I can't remember when it started but I really started noticing more when I started being in the hole and locked in a cell. It just started getting worse for me.

Discussion

In the present study, we aimed to investigate factors associated with suicide in prison through analyzing the subjective experiences of inmates who attempted suicide in prison. In this discussion we compare the current findings with prior research.

Findings and Implication

Mental Health Issues

Within the mental health issues area, the theme of depressive symptoms was consistently reported across almost all participants. This finding is not surprising, given that suicidal ideation appears in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR, American Psychological Association, 2000a)* only under symptoms of depressive episodes in the Axis I diagnostic section. Daniel (2006) also reported that depressive mood disorders were more closely related to suicide than to any other psychiatric conditions. The research literature is rich in depicting the relationship of depression and risk for suicide during incarceration (Rowan & Hayes, 1988).

The emergence of the subtheme of feelings of hopelessness is consistent with other studies showing that hopelessness and suicidal behavior were associated (e.g., Ivanoff, Jang, & Smith, 1996). Many researchers have focused on quantifying hopelessness. For example, Palmer and Connely (2005) used the Beck Hopelessness Scale to measure the strength of this feeling in participants. The present study goes beyond these prior assessments in that it sheds light on thoughts and feelings that may underlie hopelessness in prison. Many inmates associated their feelings of hopelessness with specific thoughts, feelings, and events that preceded their suicide attempts, such as repeated incarcerations, fear of dying in prison, long-term consequences of incarceration, seeing oneself as a failure, feeling unloved, and a series of negative events.

Interviewees in this study also described other aspects of depression not explored in other studies, such as the subjective experience of low mood and the nature of depressive thoughts. Inmates reported varied topics focused on rumination, such as thoughts of letting one's family down and being a burden on the family, negative evaluations of one's parenting skills, grief issues, a sense of rejection related to circumstances of adoption, as well as general negative news in the media.

Lack of outside contact has previously been associated with increased suicide risk in prison (e.g., Liebling, 1995). In the current study, lack of outside contact was also reported by some of the inmates as a factor contributing to suicide. However, we found that the subjective feelings of loneliness rather than the objective absence of support was the more important contributing factor to suicidal ideation. For example, one participant talked on the phone with a former girlfriend and three family members on the day he tried to kill himself. His subsequent appraisal of having "nobody's support" increased his suicidal ideation. This finding is strengthened by results of social psychology research conducted on social support. Rhodes and Lakey (2000) reviewed studies that focused on measuring the correlation between enacted and perceived support. They found that, across studies, the highest correlation was .3, suggesting a weak relationship between enacted and perceived support. The implications of this finding are that the assessment of inmates' feelings of loneliness/perceptions of support may be more predictive than inmates' reports of number of visits received or phone calls made.

Feelings of guilt and/or shame related to the crime for which the individual had been convicted constituted another subtheme not found in the literature. Whereas many individuals commit suicide following the commitment of their crimes, presumably out of fear of

consequences (e.g., possibly the mass shooting perpetrator at Virginia Tech in 2007 or the shooters at Columbine High School) or shame (e.g., White-collar criminals), suicide in prison appears to be less likely to be connected to the index crime due to the length of time it takes to get to prison and the opportunity the individual has to process thoughts with passing time. However, several participants indicated that shame or guilt about their crime played a role in their suicide attempts. This finding may be partially explained by the findings of a report from the World Health Organization (2007) in which it was noted that traumatic events predispose inmates to a risk for suicide. It is possible that committing certain crimes traumatizes perpetrators as well. However, this is a highly speculative hypothesis and research would be needed to test its validity. Moreover, the validity of such self-reports could be questionable because inmates, like most people, are aware of social norms, and they might have put their best foot forward during the interviews.

Symptoms of anxiety, the second theme in the category of mental health issues, were widely reported by participants. Anxiety has previously been linked to suicide in prison (Daniel, 2006). The present study highlights the reasons behind anxieties. Stressful situations such as bullying behavior described in the current study have been described previously for inmate populations (Blaaw, Winkel, & Kerkhoff, 2001) as factors contributing to suicide. Interpretations of events and thoughts, however, can be more important than the simply identifying the feeling and the reasons that cause them. For example, one of the participants in the present study attempted suicide on the night of the receipt of a threats from a group of inmates, whereas another inmate attempted suicide after a 2-month period filled with consistent threats and physical confrontations committed by various gang members. Thus,

the threat itself may be less indicative of suicide risk than the subjective interpretation of the threat and the associated level of anxiety.

Schizophrenia has previously been associated with an increased risk of suicide in prison (Daniel, 2006). The theme of hallucinations and paranoid ideation was identified in this study as well. Religious beliefs have been found to be both protective and risk factors for suicide risk (Maltzberger, 1992). This study validates both of those findings: One participant requested help before losing consciousness because of his religious beliefs. For another participant, the combination of religious and psychotic symptoms was extremely influential in the decision to attempt suicide.

Impulsivity was another theme in the mental health issues category. Several participants attempted suicide within an hour of a triggering event. However, results of some other studies do not indicate a correlation between impulsivity and suicidal ideation. For example, Dear (2000) showed that when depression was controlled, impulsivity and suicidal ideation were not linked in his sample. Participants in the present study may have acted impulsively because they were also depressed or anxious (as opposed to being impulsive by trait). This explanation is supported by the fact that the majority of inmates reported that a combination of factors led to their attempts rather than a single event. Anger also appeared to have contributed to impulsive decision-making in this study. The association of anger and depression has been well documented in the psychology literature (e.g., the concept of depression as anger turned inward: see for example, Litman, 1996). Maris (1992) also found that anger has been linked to suicide in the general population. Given these findings, the link of anger and suicide was expected, though it has not been specifically described in the reviewed literature on suicide in correctional populations.

Substance use has been found to be associated with risk for suicide in prison (Jenkins et al., 2005). In the present study, one inmate attempted suicide by overdosing on heroin, but there was little other mention of illicit substance use as a factor in suicide. Rather, psychotropic medications (specifically, noncompliance with medications and interruption in prescription) appeared to be a more important factor. Prior authors have not discussed the effects of medication-related problems on risk for suicide in prison.

Relationship Issues

Relationship issues both within the prison and outside prison have previously been connected to increased risk for suicide (e.g., Kupers, 1999). In this study the inmates gave detailed accounts of their relationship difficulties, allowing an in-depth look into the nature of their problems. Relationship issues appeared to be a larger category encompassing four themes. The first theme, relationship problems with one's family of procreation or partner outside of prison, involved lack of contact, breakup of intimate relationships, conflict, and outside problems. One example of this theme would be the attempt of the participant whose primary reason for attempting suicide was his disappointment in his wife and children's lack of visit at Christmastime. Relationship problems with one's family of origin or adoptive family included lack of contact, verbal fights on the phone, and outside problems. For example, one participant attempted suicide following a verbal fight on the phone with her mother.

The third theme of relationship problems with inmates was diverse and included three subthemes: not getting along, threats from inmates, and physical fights. Such relationship problems have been described in the literature (e.g., Kupers, 1999). The subtheme of not getting along most likely could be included in the larger term of having

coping difficulties, which has been described by many researchers (e.g., Dear, Slattery, & Hillian, 2001; Liebling, 1995; and Medlicott, 1999). Because of the phenomenological approach of this study, expressions used by inmates rather than psychological terms were employed to describe factors associated with suicide risk.

The relationship between bullying and suicidal behavior under confinement has been demonstrated in the literature (Blaaw, Winkel, & Kerkhoff, 2001). The present study provides strong support for this assertion. Eight inmates indicated that real or perceived threat played a role in their suicide attempts, and six inmates stated they had been involved in physical fights prior to their suicide attempts. Physical fights were perceived as either draining or protective factors by participants.

Finally, the theme of relationship problems with staff was represented by intentions of “getting back” at correctional officers. This attitude reflected the use of suicide as a tool to assert control in the relationship with officers. Suicides in prison have been habitually viewed as mostly actions fed by secondary gain (Johnson, 1973). Although in this study 2 inmates claimed that control of their environment was the sole purpose of their “fake” attempt, the rest of the participants indicated that, even when intent of manipulation was present, a variety of factors contributed to their suicide attempts. Therefore, the results of the present study suggest that even manipulative actions should be thoroughly assessed both because manipulative actions may lead to unintentional death and also because other risk factors may also be present that may increase an inmate’s suicide risk.

Given the large power differential between officers and inmate, some degree of relationship difficulties are expected between them. Nonetheless, it should be mentioned

that several inmates indicated that they got along well with officers, and one inmate recommended, in regard to suicide prevention, an increase in the number of officers so as to increase their availability to talk with inmates.

Prison Factors

The third category, prison factors, is a well-researched area. The themes that emerged in this category were moves within the prison, employment/activity-related difficulties, and placement in DSU. Such factors could explain why suicide is two times more common among prison inmates than in the general population (Kupers, 1999). Moves within the prison (within or between facilities) has also been shown by Williams and Bellatty (2005) to be a variable associated with suicide risk in ODOC prisons. This finding is not surprising on a common sense level either, given that changes are frequently perceived as stressful by many individuals. In addition, changes in assigned housing in prison could be interpreted as increase in helplessness.

The theme of employment/activity-related difficulties appears to be a new finding. Indirect validation is provided by Liebling (1995), who found that inmates who attempted suicide tended not to occupy themselves in their cells. Along similar lines, Nurse, Woodcock, and Ormsby (2003) found that lack of mental stimulation was judged to be detrimental for the mental health of research participants who attempted suicide in prison.

Placement in DSU was the third theme in the prison factors category. Nine of the participants attempted suicide at least once in the DSU. Williams and Bellatty (2005) also found this to be a risk factor for suicide attempt in Oregon prisons. In fact, several other researchers have indicated a relationship between confinement in isolation and suicide risk (Kupers, 1999; Rowan & Hayes, 1988; Tatarelli, Mancinelli, Taggi, & Polidori, 1999; White

& Schimmel, 1995). The results of this and other studies clearly point toward a need to avoid placement in isolation when suicide risk is a factor.

Additionally, what personal accounts of the events, thoughts, and feelings that led up to suicide overwhelmingly reflect is that these inmates were in distress at the time of their suicide attempts. Whereas signs of mental illnesses were present, the decisions to attempt suicide were preceded by a series of difficulties that drained the inmates' ability to cope. Inmates overwhelmingly indicated that they wanted to talk about their problems. Interestingly, no inmate requested a higher dosage of medication as a tool to reduce his or her suicidal thoughts, but almost all participants expressed a need to be heard and be emotionally supported. This observation underscores Liebling's (1993) suggestions in that prison suicide is not exclusively due to psychiatric disorders but also to problems in coping. The implications of these findings are that non-medical solutions that boost inmates' coping abilities also need to be implemented in any effective suicide prevention program.

Strengths and Limitations of the Current Study

Some of the strengths and weaknesses of this study are inherent in its qualitative nature. Considering strengths, the openness and flexibility of an interview format led to rich idiosyncratic data. This in turn contributed to the emergence of new findings not reported yet in other research articles.

A characteristic of qualitative studies is that no reading is free of interpretation (Lieblich, Tuval-Mashiach, & Zilber, 1998) which may be seen as a limitation. To overcome this, a second reader coded three interviews, we had input from members of a research group, and the principal investigator kept a research journal throughout the process of the investigation. Another limitation tied to the qualitative nature of the present study is that

generally narratives presented in interviews are a function of the context in which they are told, such as the aim of the study, the rapport between the interviewer and interviewee, the mood of the narrator, and momentary influences. However, several steps were taken to minimize this limitation (e.g., no benefits were provided to participants, rapport-building questions were asked at the outset of the interviews, and basic information of accounts was compared to staff reports).

Another strength of this study is its relatively large sample size: 24 inmates were interviewed. A related strength lies in the selection of the participants: All inmates who attempted suicide in prison between 1994 and 2005, who still resided in prison between May and September 2006 and who agreed to be interviewed were contacted for participation. Only 4 declined to be interviewed. Thus, the sample represented 83% of the inmates who had attempted suicide in Oregon prisons between 1994 and 2005 and who still resided in prison.

A limitation of the study is that the inmates interviewed may not be representative of the population of inmates who attempted to commit suicide in prison. Because this study involved interviewing inmates who attempted suicide in the prison between 1994 and 2005, inmates with shorter sentences had been released from prisons. Therefore, more inmates with longer sentences—and thus, those with more severe index offenses—were available to be interviewed. Similarly, because participation was voluntary, inmates with particular characteristics (such as those with a desire for attention) may have chosen to participate in the project. However, as just noted, only 4 inmates refused to participate when they were asked by their case managers to do so.

Another strength of this investigation is its relative diversity. The sample included inmates aged 21 to 53 years. Two inmates had Hispanic ethnicity. Out of the 22 inmates

reported as White on prison statistics, 5 identified themselves as biracial with Native American identity and 1 as biracial with Asian identity. The absence of African American participants is not surprising because ODOC imprisons primarily White inmates, and African American inmates have been found to have the lowest suicide rate of all ethnic groups (Lester & Danto, 1993). The participants indicated that they held various religious beliefs and sexual orientation and identity. Criminal charges varied from theft to aggravated murder, and the sentences varied from a few months to lifetime left to serve. Unfortunately, only 3 women could be interviewed. However, given that women constitute a minority ODOC prison population, this number could be representative.

Another strength was that inmates were interviewed at several sites, including six institutions, medium- and maximum-security facilities, as well as DSU and IMU units, contributing to greater generalizability of the findings. However, the data were collected in Oregon prisons only; therefore, findings may not generalize to the other correctional populations because standards for general care of inmates and suicide prevention policies vary within the United States and other countries.

The time period between the suicide attempt of an inmate and the interview varied from within a few months to 12 years. Because of the large time interval, it could be expected that the amount of detail given by inmates varied depending on the elapsed time. In addition, some environmental factors may have changed within this time frame, possibly rendering some findings irrelevant. Nevertheless, inmate who had multiple attempts tended to discuss their earlier suicidal experiences in as much detail as their most recent ones—possibly because memories formed under emotional arousal tend to consolidate well (McGaugh, 1990). Furthermore, no substantial changes in environmental factors were

apparent when less recent suicide attempts were discussed. Thus, information provided in both more recent and earlier attempts appear valid.

Finally, we believe that a major strength and unique contribution to the literature of this investigation is the description of the idiosyncratic combination of events, feelings, and individual thoughts that contributed to each inmate's decisions to attempt suicide. These presentations attempted to highlight the process rather than the static variables that contribute to suicide in prison.

Future Directions

Further research is needed to investigate the experiences of women because only 3 women were available to be interviewed in the present study. Despite the relative diversity of the sample, further research is needed to include experiences of different ethnic minorities such as African Americans, to understand the cultural factors that may contribute to suicide in prison. Because of the qualitative nature of this study, results are not intended to generalize to large populations but to offer hypotheses for future research and ideas for prevention programs. Broader survey studies across several states and institutions could be useful to validate the findings of the present investigation. Empirical studies on the most effective treatment of inmates with major depressive disorder could also be beneficial, as several symptoms of this disorder have been found to be present in the participants of this study at the time of their suicide attempts.

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Appendix A: Logistic Regression

Model Identifying Those at High Risk of Suicide
Logistic Regression

Parameter	Estimate	Standard Error	Chi-Square	<i>p</i>-value	Odds Ratio
Mental Health	2.18	0.40	29.27	<.0001	8.87
Race (Caucasian vs. Minority)	1.36	0.50	7.16	0.0074	3.91
Housing (IMU, DSU, SMU vs. GP)	2.05	0.37	29.26	<.0001	7.78
Time in Cell (days)	-0.00	0.00	7.41	0.0065	0.99
Number of Visits	0.01	0.00	5.39	0.0202	1.01

Appendix B: Data Collection Tool

PRELIMINARY SUICIDE ANALYSIS STUDY

CASE RECORD INFORMATION:

Make dark marks that fill circle completely
 RIGHT
 WRONG

SID Number									
0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

Case Name: _____
(Last name, First)

Inmate Job Title: _____

Marital Status at target date:

- Married
- Divorced
- Separated
- Widowed
- Never married

1. Target suicide attempt date or target date.

Date			
MM	DD	YYYY	
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

2. If attempted suicide, what was the time of day of the attempt?

Time			
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

- NA (control group offender)
- Unknown

3. Number of suicide attempts prior to incarceration.

- 1-2
- 3-4
- 5-6
- 7-8
- More than 8
- No previous suicide attempts

NARRATIVE: (explain any relevant events 2 weeks prior to target date up to the target date. Examples may include work/employment, housing, medical or treatment issues, visiting problems and/or conflicts with staff and/or other inmates.)

4. Prior to the target date, indicate the dates of the last three or fewer suicide attempt(s).

No prior suicide attempts

Prior Date 1			
MM	DD	YYYY	
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

Prior Date 2			
MM	DD	YYYY	
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

Prior Date 3			
MM	DD	YYYY	
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

5. Number of suicide attempts during this incarceration.

- 1-2
- 3-4
- 5-6
- 7-8
- More than 8
- No suicide attempts this incarceration
- N/A (control group offender)

6. How did DOC find out about the targeted attempt? (Check all that apply)

- Attempter notifies correctional staff
- Reported by other inmate
- Staff discovery
- N/A (control group offender)
- Other
- Unknown

7. Indicate below if the offender spent time in these units two weeks to a month prior to the target date. (Check all that apply)

- DSU
- IMU
- SMU
- No time spent in DSU, IMU or SMU

8. If DSU, IMU or SMU was indicated above, what was the amount of time the offender spent in the unit prior to the target date?

- | | | |
|---|--|--|
| <p>DSU</p> <ul style="list-style-type: none"> <input type="radio"/> 1-7 days <input type="radio"/> 1-4 weeks <input type="radio"/> 1-6 months <input type="radio"/> No time in DSU | <p>IMU</p> <ul style="list-style-type: none"> <input type="radio"/> 1-7 days <input type="radio"/> 1-4 weeks <input type="radio"/> 1-6 months <input type="radio"/> 7-12 months <input type="radio"/> More than one year <input type="radio"/> No time in IMU | <p>SMU</p> <ul style="list-style-type: none"> <input type="radio"/> 1-7 days <input type="radio"/> 1-4 weeks <input type="radio"/> 1-6 months <input type="radio"/> 7-12 months <input type="radio"/> More than one year <input type="radio"/> No time in SMU |
|---|--|--|

9. If in General Population during the target date, was the offender socially isolated?

- Yes
- No *If no, skip question 10.*

10. If yes to question 9, identify the type of social isolation.

- Self imposed isolation
- Isolated by other inmates
- Isolated by staff
- Other, (explain) _____

11. Indicate below the level of alcohol and/or substance abuse issues related to this offender. (Check all that apply)

- Past history, drugs only
- Past history, alcohol only
- Past history of both drugs and alcohol
- Current use, drugs only (+ UA)
- DR for Pruno/Alcohol involvement
- No current or past history

PSYCHOLOGICAL PROFILE

12. Any evidence that this offender was feeling victimized?

- Yes
- No

If yes, explain:

13. Does this offender have a history of being in residential treatment as a child or adolescent?

- Yes
- No history indicated in the case record

14. Was the offender diagnosed with a DSM-IV mental disorder at the time of the target date?

- Yes
- No

15. If yes, list all DSM diagnosed conditions within the last 3 months.

	Official use only
	<input type="radio"/> Diagnosis 1 <input type="radio"/> Diagnosis 7 <input type="radio"/> Diagnosis 2 <input type="radio"/> Diagnosis 8 <input type="radio"/> Diagnosis 3 <input type="radio"/> Diagnosis 9 <input type="radio"/> Diagnosis 4 <input type="radio"/> Diagnosis 10 <input type="radio"/> Diagnosis 5 <input type="radio"/> Diagnosis 11 <input type="radio"/> Diagnosis 6 <input type="radio"/> Diagnosis 12

16. Indicate the offender's psychiatric history prior to incarceration, explain if needed:

- Past diagnosis & treatment for psychological reasons
- Prescribed medication in the past for psychological reasons
- Past hospitalization due to psychological reasons
- None

17. Were there any documented changes in the offender's behavior 1 to 2 weeks prior to his/her target date?

- Yes
- No

If yes, check all that apply:

- Giving away possessions
- Crying/displaying emotional behavior
- Displaying lack of focus
- Writing notes but not mailing them
- Significant life events or changes (explain)*
- Writing notes and sending them
- Mentioning a desire to die
- Requesting CTS help
- Other change (explain)*
- None indicated

Explain*

RECENT OFFENDER CHANGES:

18. Indicate below any stressors the offender was dealing with 1 to 2 weeks prior to his/her target date. (Check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Recent entry into prison (i.e. 1st 24 hours) | <input type="checkbox"/> Recent, prior suicide attempt |
| <input type="checkbox"/> Detainer (County, State, or Federal) | <input type="checkbox"/> Intoxication |
| <input type="checkbox"/> Personal loss/death | <input type="checkbox"/> Anxiety due to closeness to release |
| <input type="checkbox"/> Loss of guardianship/loss of parental rights | <input type="checkbox"/> Severe guilt over alleged offense |
| <input type="checkbox"/> Marital breakup/divorce | <input type="checkbox"/> Recent court appearance |
| <input type="checkbox"/> Change in visit/cancellation of visit | <input type="checkbox"/> Loss of "Good Time" |
| <input type="checkbox"/> Bad visit | <input type="checkbox"/> Change in work status |
| <input type="checkbox"/> Family members refuse to visit | <input type="checkbox"/> None |
| <input type="checkbox"/> Threat of assault or victimization | <input type="checkbox"/> Other 1 <u>Specify</u> _____ |
| <input type="checkbox"/> Gang related issues/difficulty with gang activity | <input type="checkbox"/> Other 2 _____ |
| <input type="checkbox"/> Disciplinary action | <input type="checkbox"/> Other 3 _____ |
| <input type="checkbox"/> Physical illness | <input type="checkbox"/> Other 4 _____ |
| <input type="checkbox"/> Loss of privilege(s) significant to inmate | <input type="checkbox"/> Other 5 _____ |
| <input type="checkbox"/> Lengthy incarceration | <input type="checkbox"/> Other 6 _____ |
| <input type="checkbox"/> Debts | <input type="checkbox"/> Other 7 _____ |

LEGAL BACKGROUND

Legal history narrative:

FAMILY/CHILDHOOD HISTORY

19. Family or childhood stressors (list all that apply to this offender):

- Divorced parents
 - Poor family relations
 - Sexually abused as child
 - Physically abused as a child
 - Neglected as a child
 - Abandoned as a child
 - Emotionally abused as a child
 - Ritual abuse
 - Step child
 - Foster child
 - Adopted child
 - Suicide attempts w/in family
 - Poor peer related issues as a child
 - OYA /detention involvement
 - Residential treatment
 - None apply
- Specify**
- Other 1 _____
- Other 2 _____

VISITATION INFORMATION

20. One to 2 weeks prior to the target date, did the offender receive any visits from family or friends?

- Yes
- No

21. One to 2 weeks prior to the target date, were there any recent changes in the number of visits from family or friends?

- Yes
- No

If yes, explain:

22. Were there changes in this offender's visits within the last year?

- Yes
- No

If yes, explain:

MEDICATIONS:

23. Was the offender on any medication at the time of target date?

- Yes, cell medications
- No, cell medications
- Yes, controlled medications
- No, controlled medications

24. If yes, list all medications (Psych medications or any other medications.)

1	5	9
2	6	10
3	7	11
4	8	12

<input type="radio"/> Medication 1	Official use only	<input type="radio"/> Medication 9
<input type="radio"/> Medication 2	<input type="radio"/> Medication 5	<input type="radio"/> Medication 10
<input type="radio"/> Medication 3	<input type="radio"/> Medication 6	<input type="radio"/> Medication 11
<input type="radio"/> Medication 4	<input type="radio"/> Medication 7	<input type="radio"/> Medication 12
	<input type="radio"/> Medication 8	

25a. How many ICD-9 medication changes did the offender have 3 months prior to his/her target date?

- | | |
|---|---|
| In cell medications | Controlled medications |
| <input type="radio"/> 1-2 | <input type="radio"/> 1-2 |
| <input type="radio"/> 3-4 | <input type="radio"/> 3-4 |
| <input type="radio"/> 5-6 | <input type="radio"/> 5-6 |
| <input type="radio"/> More than 6 | <input type="radio"/> More than 6 |
| <input type="radio"/> No medication changes | <input type="radio"/> No medication changes |
| <input type="radio"/> N/A | <input type="radio"/> N/A |

25b. How many DSM-IV medication changes did the offender have 3 months prior to his/her target date?

- | | |
|---|---|
| In cell medications | Controlled medications |
| <input type="radio"/> 1-2 | <input type="radio"/> 1-2 |
| <input type="radio"/> 3-4 | <input type="radio"/> 3-4 |
| <input type="radio"/> 5-6 | <input type="radio"/> 5-6 |
| <input type="radio"/> More than 6 | <input type="radio"/> More than 6 |
| <input type="radio"/> No medication changes | <input type="radio"/> No medication changes |
| <input type="radio"/> N/A | <input type="radio"/> N/A |

MEDICATIONS CONTINUED:

26. Indicate the number of dosage changes 3 months prior to the offender's target date.

In cell medications

- 1-2
- 3-4
- 5-6
- More than 6
- No medication changes
- N/A

Controlled medications

- 1-2
- 3-4
- 5-6
- More than 6
- No medication changes
- N/A

27. What medications were changed within this 3 month time frame?

1	5	9
2	6	10
3	7	11
4	8	12

Official use only

- | | | |
|------------------------------------|------------------------------------|-------------------------------------|
| <input type="radio"/> Medication 1 | <input type="radio"/> Medication 5 | <input type="radio"/> Medication 9 |
| <input type="radio"/> Medication 2 | <input type="radio"/> Medication 6 | <input type="radio"/> Medication 10 |
| <input type="radio"/> Medication 3 | <input type="radio"/> Medication 7 | <input type="radio"/> Medication 11 |
| <input type="radio"/> Medication 4 | <input type="radio"/> Medication 8 | <input type="radio"/> Medication 12 |