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Multisystemic Therapy Intervention for adolescent girls with depression incarcerated in selected rehabilitation schools in Kenya.

Michael Mbiriri, Ph.D., Kisii University

Abstract

The purpose of this paper is to show effectiveness of Multisystemic Therapy (MST) on depression among juvenile girls incarcerated in rehabilitation schools in Kenya. The study investigated effectiveness of MST on depression. It is worth noting that behavioral and emotional problems are among the most commonly occurring mental disorders of the juvenile girls incarcerated at Kirigiti and Dagoretti rehabilitation schools. Socio-demographic questionnaires and Achenbach Youth Self–Report were administered to the respondents. The prevalence of depression problem was 66.7%. In the experimental group, the study showed statistically significant difference in mean difference scores at both post-treatments one and two ($p<0.001$). This therefore is an indication that MST had an impact on post treatments one and two among the juvenile delinquents in the experimental group as opposed to the control group. The results provide significant insights into effectiveness of MST on selected depression problems among juvenile girls incarcerated in rehabilitation schools.

Key words: Multisystemic Therapy, depression, Kirigiti, Dagoretti, incarceration, rehabilitation.

Introduction and Background

Multisystemic Therapy is a treatment programme designed to make positive changes in various social systems that contribute to antisocial behaviour of children and adolescents (Larfortune, 2010). It is a supported treatment service for severe conduct disorder and antisocial youth as well as emotional and behavioral problems. According to Hann, Miller, and Waldfogel (2010), 40% of adolescents incarcerated in rehabilitation centers have conduct disorder. General guidance and counseling is provided to the youth who have previously been admitted to Kirigiti and Dagoretti rehabilitation centers. Studies indicate that individuals with mental disorders are likely to get involved in the criminal justice system (James & Glaze, 2006). For example, USA Bureau of

Justice and Statistics reported that 56% of the inmates in state prisons, 45% of inmates in federal prisons, and 64% inmates in jails had symptoms of mental health disorders (James & Glaze, 2006). The most frequent diagnosis held by juvenile offenders is conduct disorder, bipolar disorder, major depression and anxiety disorder (Lafortune, 2010).

In the context of human society, a family is a group of people affiliated either by consanguinity, affinity, or co-residence or some combination of these (Barley, 2007). In most societies the family is the principal institution of socialization and the basic unity for raising children (Lewin, 1990). Family teaches children to control unacceptable behaviour, to delay gratification, and to respect the rights of others. Families can teach children aggressive, antisocial and violent behaviour. The traditional two-parent family with a working father, a stay-at-home mother, and their biological children was considered the ideal family for the well-being of children. Today few families reflect the ideal family. The industrial revolution coupled with technology exerted indirect effects on the world of a child when it pulled men away from the farms into factories, introduced feminization of the work place which gave birth to the "working mother", and today the influx of employment opportunities and strong emphasis on individualism have negated the purpose of the family to the disadvantage of the child (Lewin, 1990). Thus, the family continues to evolve and take the form of a variety of types, such as a blended family, a cohabiting family, and a single-parent family.

Family type affects preschool readiness, educational achievement at elementary, secondary, and college levels. This is regarded as a fact, because the family type in which the child stays affects a range of child behavior that can bare directly on educational success, such as school misbehavior, drug and alcohol consumption, sexual activity and teen pregnancy, psychological distress and conduct disorders. Children from single-parent families are two times more likely to have behavioral problems as opposed to both parent families (Wilderman, 2010). One of the most reliable indicators of violent crimes in a community is the proportion of single-parent families (Steinberg, 2013). Children from single-parent families are more prone than children from two-parent families to use hard drugs, be expelled from schools, and have emotional and behavioral problems (Skelton, 2010). As more and more families progress towards the single-parent family, there is a great likelihood of more juvenile delinquency (Skelton, 2010).

Juvenile girls have needs and problems that arise from organic, psychological and social pressure (Ige, 2014). These pressures in turn exert influences on them, which make them exhibit behaviour that is not in consonance with societal norms leading to delinquency. Adolescents from parents with adequate income, good occupation and high status are likely to be provided with huge quality private education from nursery to university level (Mulatie, 2014). It is likely therefore that such children will be less delinquent than their counterparts from low socio-economic background as they may not steal. As a result, there appears to be a relationship between family socio-economic status and juvenile delinquency.

Statistical data indicate that in virtually all parts of the world with the exception of the United States, rates of juvenile crime rose in the 1990's (Wildeman, 2010). In Western Europe, arrest of juvenile delinquent and under-age offenders increased by an average of 50% between the mid-1980's and the late 1990's (Granado, Roca, & Gemma, 2014). The World Youth Report, a comprehensive document expounding on global juvenile crimes, estimated that the number of adolescents and children in difficult circumstances increased from 150 million to 190 million between the years 2010 to 2014 (UNO, 2015).

The same World Youth Report (2015) indicated that in the USA, delinquency rate of male offenders was more than that of juvenile females. The report also noted that juvenile crime in the USA was most prevalent among early adolescents and least prevalent among late adolescents. The rates were high for theft, robbery, and rape and lower for violent offences (UNO, 2015). In countries with more urbanized population such as the USA and other developed countries, the rates of juvenile offences were high (Fraser, Solovey, Grove, Lee, & Greene, 2012). These same countries have adopted restorative justice to treat juvenile delinquency (Fraser et al., 2012).

In Kenya the number of juvenile delinquents that go to correctional facilities to serve for the crime they have committed has been on the rise (Kikuvi, 2012). Kikuvi noted that incarcerated youths return to the justice system at a higher rate. The juvenile delinquent rehabilitative in Kenya programmes includes counseling, psychoeducation, education vocational training and community work (Kikuvi, 2012). This rehabilitation programmes are meant to promote personal

responsibility and provide offenders with real opportunities to succeed in legitimate occupation. Effective rehabilitation is essential to juvenile delinquency re-entry into main stream society because it helps to eliminate the vicious cycle of recidivism. Proper rehabilitation can lead to juvenile delinquent populating not resorting to adult criminal activity and antisocial personality disorder. The most effective and better alternative for juvenile delinquency rehabilitations are group therapy, cognitive behaviour therapy, Multisystemic therapy and family therapy (Jongsma, 2006). Studies demonstrated the connection between child abuse and neglect and later violent delinquent behaviour, (Kang & Burton, 2014).

A study done by UNO (2015) found that adolescents from families reporting multiple forms of violence are twice as more likely as their peers from nonviolent homes to report committing violent offences. Youths who were neglected as children are almost as likely to be arrested for violent crimes as those who were physically abused. In view of the fact that most violent behaviour is learned behaviour, there is great potential for successful intervention (Wildeman, 2010). In general, treatment programmes for violent juvenile offenders must integrate cognitive restructuring, coaching, and psycho-education (Ngo, 2014). Ngo argued that such programmes may be community based with a strong case of advocacy component. Effective intervention programmes for juvenile delinquency should provide opportunities for the child's involvement and should demonstrate respect for the youth (Park, 2014).

It is significant to note that the number of girls entering the juvenile justice system has risen at a startling rate in the world (Wildeman, 2010). Girls' interaction with the juvenile justice system was reported to have increased at all levels: status offences, arrest rates for violent crime, detainment in centers and commitment to residential facilities (Fraser et al., 2011). The interrelated troubles of delinquent girls have been increasingly documented over the past decades, largely based on focus groups, surveys and interviews with system-involved and incarcerated girls (Zimmerman & Porgarsky, 2011). According to Mulatie (2014), children who were habitual offenders started committing crime in their childhood. Ige (2014) noted that such children rapidly increased their offending activities in adolescents and slowed down in adulthood.

The UNO report of 2015 showed that juvenile delinquency in Africa was attributed to hunger, poverty, conflict and unemployment. These were linked to the marginalization of juveniles in the already severely disadvantaged segment of society (UNO, 2015). The offences committed by the young people were theft, robbery, smuggling, prostitution, drug and substance abuse and drug trafficking (UNO, 2015). The societal costs of the child delinquency were great and included loss of life and property, and court and imprisonment costs (Zimmerman & Pogarsky, 2011). Negative life events were known contextual risk factors of child delinquency (UNO, 2015).

A study by Omboto, Ondiek, Odera, and Ayugi (2013) in Kenya indicated that there were several underlying factors that influenced criminality among the youth. They carried out a study at Kamiti Youth Corrective and Training Centre in Nairobi County, the only penal institution for young male offenders aged 17-21 years. The study postulated that drugs greatly influenced juvenile delinquency and that the youth committed crime to get money to sustain their use of drugs. What was more significant was that 64% of the youth came from dysfunctional homes, 78% had never gone beyond primary education, while 58% were from large families of more than six siblings.

In Kenya, juvenile offenders are taken to juvenile rehabilitation centers for rehabilitation. However, the effectiveness and success of the rehabilitation of the juvenile offenders has been questioned by Omboto et al. (2013). Literature indicated that the majority of the studies conducted on juvenile offenders from developed countries, although there has been an attempt to carry out studies in the field in Africa and in Kenya in particular. There are indications that inappropriate rehabilitations measures are likely to lead to emotional and behavioural problems. A study which was carried out by Human Rights Watch in 2012 among adolescents' incarcerated in Nairobi and Dagoretti rehabilitation schools indicated that rehabilitation measures in these centers included caning, and being kept away from home (Human Rights Watch, 2013). The study indicated that girls were subjected to solitary confinement and food rationing as well as flogging. It is possible that these rehabilitation measures are likely to lead to internalizing and externalizing problems among incarcerated adolescents. This is because rehabilitation schools continued to lay emphasis on punishment instead of correction and rehabilitation and none addressed the emotional problems of the adolescents which could explain why after release some girls were re-arrested.

According to the Bowlby theory of attachment, children need to form attachment with significant others (Siegel, 2010). Bowlby emphasized that prolonged separation of a child from significant others would result in long-term psychological damage (Lafortune, 2010). This theory argued that children who are separated from their main attachment can experience anxiety and a feeling of deprivation, they would lack emotional bonding and they would not be able to form lasting relationships later in life because they would have low levels of empathetic understanding (Wilderman, 2010).

The treatment programme of MST could address juvenile delinquency as well as adolescents' behavioural and emotional problems. Its overall goal is to improve the youth's ability to make sound decisions in life. In addition, the model could help adolescents in choosing the right action. To achieve these goals, the MST therapist is expected to (1) interview the youth and school officials, to identify the youth's problem behaviour and their causes; (2) identify the youth's personal strength, and positive aspects of their family, peer groups, and schooling, which could be used to address their behavioral problems; (3) help the youth to set goals, for example, regular school attendance and less contact with delinquent peers

Methodology

This study used quasi-experimental design with Kirigiti girls' rehabilitation school being an experimental site and Dagoretti was the control site. In the experimental site, the researcher administered MST and tested its efficacy in managing the behavioural and emotional problems of girls incarcerated in the rehabilitation schools. The researcher did not administer MST on the control group, but psychoeducated respondents on behavioural and emotional problems after the study; quantitative methods were used.

Kirigiti and Dagoretti have similar study population. After conviction, girls can either join Kirigiti or Dagoretti depending on availability of space; meaning that there is no significant difference between the two schools ($p<0.005$). The quasi experimental research design used in the study enabled the researcher to compare the control and the experimental sites in order to determine the effectiveness of MST. In order to mitigate the feelings of the girls where MST was not used, the researcher briefed the administration as well as the study participants.

The researcher purposively sampled the two girls' rehabilitation schools. After administering Youth Self-Report in the two schools, the researcher then randomly selected Dagoretti as the control site (n=40), and Kirinyaga as the experimental site (n=45). Seven participants dropped out, giving an 8.2% attrition rate. .

The following instruments were used to collect data from the sampled respondents.

(i) Socio-demographic profile questionnaire

(ii) Achenbach Youth self-report 11-18 years

(iii) Secondary data abstracted from admission files

Respondents in the experimental group were divided into groups. Each group had between 6-12 participants. The groups were homogeneous in terms of age as well as internalizing and externalizing problems they exhibited. Each group had 12 MST sessions all of which were administered within a span of about three months. The therapist also psychoeducated the teachers and other non-teaching staff on how to interact with the adolescents incarcerated in the two schools.

After three and six months respectively, YSR was re-administered to the respondents who qualified for the intervention in both groups. Analysis was guided by baseline survey for both schools. In order to determine the effectiveness of MST, the difference in the score of the behavioural and emotional problems was compared between the schools and within the schools at baseline, mid-line and end-line. Juvenile internalizing and externalizing problems were assessed with youth YSR. The YSR contains a list of 118 specific problems in children and adolescents. It has been standardized on a sample between 11 to 18 years, and consists of two broad scales that reflect externalizing and internalizing domains. The internalizing composite consists of the anxious, depressed, somatic complaints and social withdrawal subscale, while the externalizing composite consists of the aggressive and delinquent behaviour subscale. Internal consistency (>0.90), test retest reliability was (0.86 – 0.90) while the factorial validity was found to be good (Achenbach, 2001).

YSR was used to assess depressive disorder, anxiety disorder and conduct disorder. Data analysis using SPSS version 25 to describe each category of DSM-V diagnosis of participants was done by summing up the responses to meet the DSM-V criteria for depression, anxiety, conduct disorder, Probability values of equal or less than 0.05 (≤ 0.05) was taken to be statistically significant.

Results

The purpose of this study was to find out whether MST was effective in treating depression problems exhibited by the girls in the two rehabilitation schools. The results indicated that MST was effective in treating selected behavioral problems. Following the baseline recruitment, a total of 85 participants were enrolled in two groups, namely the control (n=40) and the experimental (n=45), with an attrition rate of 8.2%. The control and experimental groups were comparable with respect to key socio-demographic characteristics as well as dependent variables at baseline.

Affective-Problems Depression Disorder

Table 1: Mean Scores at Pre-Treatment and Post-Treatment at 3 Months and 6 Months for Control and Experimental Groups for Affective-Problems Depression Disorders.

	Pre-treatment/baseline	Treatment One/3 months	Treatment Two/6 months
Experimental (n=38)	10.3421 (3.65599)	7.8684 (3.44196)	5.9737 (3.06230)
Control (n=40)	7.1500 (3.34012)	6.1000 (3.44033)	5.7000 (2.38800)

Table 1 reveals a steady decline in the mean scores for the control and experimental groups at the repeated measures. Control mean scores declined from 7.1500 (SD +3.34012) at baseline to 5.7000 (SD +2.38800) at post-treatment two. The experimental group mean scores declined from a baseline of 10.3421 (SD +3.65599) to a post-treatment two of 5.9737 (SD +3.06230) as shown

in Table 1. This shows a significant drop in mean scores between the baseline and the post-treatment one and post-treatment two in the experimental group as opposed to the control group.

Table 2: Mean Outcome Difference Scores from Pre- Treatment to Post-Treatment at 3 Months and 6 Months Follow-Up for Control and Experimental Groups in Affective Problem Depression Disorder.

Mean Difference Scores.

	Pre-treatment	Treatment One	p-value	Treatment Two	p-value
Experimental (n=38)		2.47368 (2.99312)	P<0.001	4.36842 (3.69383)	P<0.0001
Control (n=40)		1.05000 (3.68608)	P=0.079	1.45000 (3.55145)	P=0.014

Sample paired T-test was used to determine the statistical significance in the paired mean difference scores between baseline and post-treatment one and post-treatment two, as indicated in Table 2. With regard to control group, the study reveals mean difference scores between baseline and treatment one of 1.05000 (SD +3.68608) and this was not statistically significant (p=0.079). At post-treatment two, the mean difference scores was 1.45000 and this was statistically significant (p=0.014). With respect to the experimental group, the study shows statistically significant difference in mean difference scores at both post-treatment one and post-treatment two (p<0.001). Therefore, this is an indication that MST had an impact on post-treatment one and post-treatment two among juvenile delinquents in both the experimental and control groups.

Table 3: Effect Sizes from Pre-Treatment to Post-Treatment at 3 And 6 Month Follow-Up for Control and Experimental Groups in Affective-Problems Depression Disorder

	Pre/3-month post-treatment		Pre/6-month post-treatment	
	Effect sizes	95% CI	Effect sizes	95% CI
Experimental (n=38)	0.706	-0.082 – 1.494	1.313	0.565 – 2.061
Control (n=40)	0.314	-0.420 – 1.047	0.506	-0.122 – 1.134

Table 3 shows the effect size for both control and experimental groups at post-treatment one and post-treatment two for depression. With regard to control, Cohen's d effect size value for post-

treatment one (d=0.314) was small while at post-treatment two (d=0.506) it was medium effect size. For the experimental group, very large effect sizes were noted at post-treatment one and post-treatment two. Cohen's d effect size value for post-treatment one (d=0.706) and post-treatment two (d=1.313) suggested a very large practical significance for the experimental group and these were statistically significant. This shows that MST had an impact at post-treatment one and post-treatment two among incarcerated adolescents in the experimental group.

Discussion

The findings of this study demonstrate that MST was effective in treating depression. It was noted that the effectiveness of MST was consistent with other studies. The current investigation demonstrates that MST treatment resulted in favorable effects on internalizing depression disorder in adolescents receiving regular intervention in the experimental groups, indicating that MST participants scored significantly lower on primary outcome measure on depression disorder. Results also emphasize the importance of adherence to MST protocol in studies as evidenced from marked site differences. YSR rated adolescents significantly high on total internalizing depression problem scale in the experimental group as compared to the control group. It is possible that when adolescents engage in open discussion and gain cohesion through the MST sessions, they become less troubled and withdrawn.

There are ten public rehabilitation schools in Kenya. These schools admit adolescents who are between 10 to 18 years; two for girls and eight for boys. When the girls are apprehended by the police they are taken to court and if convicted, they are incarcerated in rehabilitation schools for a maximum of three years. These girls come from different parts of the country. Most of the children incarcerated in rehabilitation schools come from low socio-economic status, mainly the slums and the streets. The majority of these children had dropped out of school before being incarcerated. Once admitted in rehabilitation schools, they join classes four to eight depending on their level of academic ability or their previous classes.

MST was effective in inhibiting a general upward trend on depression symptoms found among some adolescents. The finding that adolescents receiving MST reported significantly less delinquency behaviour than did the control group counterparts was consistent with the researcher's expectations and attested to the effectiveness of MST procedure. Adolescents from both groups reported significantly less internalizing depression problem at end-line than at baseline. As noted by Greenson et al. (2011) MST has been shown in a number of rigorous tests to be superior to other interventions for adolescents exhibiting internalizing and externalizing problems. Positive outcomes include maintaining young people within their home, reducing re-arrest rates as well as reducing adolescent psychiatric symptoms (Greeson et al., 2011). Unstable home life characterized by caregiver abuse, as well as disrupted parental attachment may lead to recidivism (Jongsma, 2006). The risk of developing delinquent behaviour is often attributable to family or parenting factors (Lafortune, 2010). According to Kang and Burton (1990), indifferent parenting styles have the worst outcomes on a number of behavioral and psychological problems.

In addition, the findings of this study suggest that MST may be recommended to adolescents incarcerated in rehabilitation centers (Frasers et al., 2012). There is evidence to suggest that MST has positive effects on improved emotional health, educational outcomes, family relations, and decreased conduct disorder (Ige, 2014). Research by Granado et al. (2014) showed that MST is successful in achieving a number of service outcomes, including peer relations, reduced aggressive behaviour as well as decreased association with deviant peers. Outcomes for conduct disorder and delinquency have consistently favoured MST compared to controls (Butler et al., 2011). The results of this study have supported the finding that MST is a well-established intervention for juvenile and adolescent delinquents manifesting internalizing and externalizing problems (Butler et al., 2011).

Conclusion

MST seemed to stipulate disparity in effectiveness between pre-intervention (baseline) and post-intervention (mid-line and end-line assessment). In conclusion, MST was efficacious since there was significant change that transpired among respondents with depression that was accredited to intervention. The research was adequate in terms of inclusion of the experimental and control groups. MST programme adherence by clinicians has been positively associated with treatment effect. On the basis of this, a major focus of MST is to empower persons by providing them with

life skills needed to deal effectively with systems and future challenges. Toward this end, treatment focuses on facilitating the development of social support network within the person's environment and a pool of service providers. As such, youth are taught requisite skills such as assertiveness training and anger management which are linked to academic and vocational resources needed for long-term success. MST therapeutic contacts emphasize the positive and the use of systemic strength as levers of change. It is therefore recommended that MST be adopted in all rehabilitation centres.

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