

A Comparative Study among Orphans and Non-Orphans on Intelligence and Substance-Use

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Abstract

This study explores whether intelligence is influenced by the status of being an Orphan or Non-Orphan. A secondary purpose is to explore whether differences in status (orphan/non-orphan) have influenced them towards substance use. The study is based on purposive sampling of 42 male orphans, 16 female orphans (58 orphans) and 36 male non-orphans, 36 female non-orphans (72 non-orphans). Results of analysis of variance (ANOVA) indicate that low intelligence level is not significantly related with being an orphan and substance use too is not positively significantly influenced by the status of being an orphan. Finally, the findings of the current study suggest that orphans are no more at risk for developing substance abuse disorder and no less intellectually capable than non-orphans.

***Keywords:** intelligence, substance-use, orphans, non-orphans, abandonment.*

According to the United Nation's International Children's Fund (UNICEF), the definition of an orphan is "anyone between the ages of 0 and 17 who has lost at least one parent". According to this programme under the United Nations Organisation, a child with one living parent can be considered as a single orphan, while

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a child with no living parents is considered as a double orphan. An abandoned child is any child (aged 0-17) who is left to grow up without the guidance of parents or family. This is a very difficult number to estimate. According to UNICEF, there are as many as 100 million children living on the streets worldwide. While child abandonment typically involves physical abandonment, it may also include extreme cases of emotional abandonment. There are more than 11 million abandoned children in India, and more than 90% of them are girls.

Scientific studies of orphans began in the 18th century and continued to the present day. It was found that children, who have undergone family deprivation, have a variety of negative features. According to studies, these children and adolescents develop a number of negative characteristics: slow rate of mental development (Mukhamedrakhimov, 2006), low Intelligence Quotient (Bardyshevskaya & Lebedinsky, 2003, 320), emotional and regulatory disorders (Koltinova, 2013, 158-163), instable and inadequate self-esteem (Shvets, 2011, 181.; Karnaukh, 2006), anxiety and hostility to adults and low sociometric status in the group of peers (Karnaukh, 2006), poor skills of self-control (Mikhaylova, Yu, 2004; Chuprova, 2007; Shvets, 2011) and of socially acceptable behavior (Muhamedrahimov et al., 2008, 297.), distorted identity (Savkova, 2013, 14-16) and family image (Shubina, 2013, 303; Shulga & Tarenko, 2013, 2, 203-213).

Children in orphanages have been studied in many parts of the world (e.g., Iran, Lebanon, United States, Greece, Romania, Russia, and Canada). In most studies, children with orphanage experience are compared to children reared in foster care, adopted children, or children who were home-reared from birth. Typically, orphanage children fare less well on most measures than children in these other groups. (Morison, Ames, and Chisholm 1995, 41,

411–430; Ames, 1997; Morison and Ellwood 2000, 46, 717–737; Rutter et al. 1998, 39, 465–476; Sloutsky, 1997, 20, 131–151).

In terms of Substance Abuse, numerous evidences are emerging to show that children who are orphaned, homeless or live on the streets without parental or adult supervision are at greater risk of using (and abusing) substances (Meghdadpour et al. 2012,1329-1340; Bojorquez et al, 2010;Amoateng et al, 2006; Brook, Brook, Rosen &Rabbitt, 2003, 42, 485-492).

Substance use may be simply defined as the consumption of alcohol or drugs. Though it does not always lead to addiction; many people occasionally use alcohol or certain drugs without being addicted. . However, substance use always comes with the risk that it might lead to addiction. Substance abuse, meanwhile, is when a person consumes alcohol or drugs regularly, despite the fact that it causes issues in their life. The issues caused by abuse may be related to their job, their personal life, or even their safety. People who abuse drugs and alcohol continue to consume them, regardless of the consequences.

The causes of substance abuse may be due to many factors but in this study, we have looked into this particular variable because orphans may be more involved in substance use as there is lack of parental guidance which is a key factor that lead to substance abuse and also orphans as compared to non-orphans are believed to have more amount of stress, require drugs or alcohol for tension reduction and for reinforcement. According to Carson, Butcher & Mineka in their book “Abnormal psychology and modern life”, a large number of investigators have pointed out that the typical alcoholic is discontented with his or her life and is unwilling to tolerate tension and stress which is more likely to be seen among orphans who have been deprived in different aspects as compared to non-orphans who have the privilege to live a more tension free life.

Method

Sample: The sample for this study included 42 male orphans, 16 female orphans (58 orphans) from a local orphanage and 36 male non-orphans, 36 female non-orphans (72 non-orphans) from a local school in Aizawl city. Since it is a small study, purposive sampling procedure was used for sample collection. Qualitative interviews, observation procedures and the use of several other instruments were not employed here as time was very limited and the sample was necessarily restricted in size.

Tools Used: We employed two self-report questionnaires for the study.

1) Substance Use Questionnaire(SUQ; Rohner Research Publications, 2009):

The SUQ was designed to evaluate the abuse of illegal drugs and alcohol. In most cases of adolescent studies, participants are asked only about alcohol (not illegal drugs) use. They are first asked to indicate whether they had ever consumed alcohol in their life. Participants who answered positively to the first question were presented with 4 more questions about their substance use behavior (e.g., “Once I start drinking, I find it difficult to stop”). However, in the current project, for the soundness of it, the participants were allowed to respond to all 5 items/questions. Also, a translated version (in Mizo) of the SUQ by Mrs. Lalropuii (*Asst. Professor*, Pachhunga University College) was used for a better understanding of each statement.

2) Raven’s Standard Progressive Matrices (RSPM; Raven, J., Raven, J.C., & Court, J.H, 1992):

The Raven’s Standard Progressive Matrices (RSPM) was designed to measure a person’s ability to form perceptual relations and to reason by analogy independent of language and formal schooling, and may be used with persons ranging in age from 6

years to adult. It measures Spearman's g factor. The RSPM consists of 60 items arranged in five sets (A, B, C, D, & E) of 12 items each. Each item contains a figure with a missing piece. Below the figure are either six (sets A & B) or eight (sets C through E) alternative pieces to complete the figure, only one of which is correct. Each set involves a different principle or "theme" for obtaining the missing piece, and within a set the items are roughly arranged in increasing order of difficulty. The raw score is typically converted to a percentile rank by using the appropriate norms.

Administration of the test: Permission from the respective heads were taken from the institutions for data collection. The informed consent was taken from the in-charge of participants while explaining the objectives of the study and assuring the confidentiality of the information sought from them. The tools were administered in group settings. Both tests were administered on separate occasions for each group; the SUQ, first and the RSPM, second. The Substance Use Questionnaire was administered individually, whereas the Raven's Standard Progressive Matrices was administered in groups for convenience. Generally, it took a participant about a minute to complete the SUQ whereas the RSPM was completed mostly within 30-40 minutes.

Statistics Used: The Statistical Package for the Social Sciences (SPSS 20) was employed to analyze the data using Analysis of Variance (ANOVA).

Results:

Effect of status (non-orphan/orphan) on intelligence:

Results of a simple factorial Analysis of Variance (ANOVA) revealed that there is no significant difference ($p < .093$) among non-orphans ($M=42.80$) and orphans ($M=37.92$) on intelligence

which indicates that non-orphans did not score higher on intelligence test as compared to non-orphans.

Table 1. The mean and SD of Non-Orphans and Orphans on intelligence.

Descriptive Statistics

Dependent Variable: Rspmtt

Orphan NonOrphan	Mean	Std. Deviation	N
0	42.8065	10.0247	31
1	37.9231	11.54443	26
Total	40.5789	10.92498	57

Table 2. The result of factorial ANOVA (Non-Orphans and Orphans) on intelligence.

Tests of Between-Subjects Effects

Dependent Variable: Rspmtt

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	337.210 ^a	1	337.21	2.922	0.093
Intercept	92156.298	1	92156.298	798.621	0
OrphanNonOrph	337.21	1	337.21	2.922	0.093
Error	6346.685	55	115.394		
Total	100543	57			
Corrected Total	6683.895	56			

a. R Squared = .050 (Adjusted R Squared = .033)

Effect of status (Non-orphan/Orphan) on Substance Use:

Results of factorial ANOVA revealed that non-orphans (M=.00) and orphans (M=.00) does not significantly vary in substance use which indicates that orphans who were expected to score higher did not score higher as expected and are the same with non-orphans on substance use.

Table 3. The mean and SD of Non-Orphans and Orphans on Substance Use.

Descriptive Statistics

Dependent Variable: suqtt

orphanNONorphan	Mean	Std. Deviation	N
0	0	0	35
1	0	0	30
Total	0	0	65

Table 4. The result of factorial ANOVA (Non-Orphans and Orphans) on Substance Use.

Tests of Between-Subjects Effects

Dependent Variable: suqtt

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.000 ^a	1	0	.	.
Intercept	0	1	0	.	.
orphanNONorph	0	1	0	.	.
Error	0	63	0		
Total	0	65			
Corrected Total	0	64			

a. R Squared = . (Adjusted R Squared = .)

Discussion

The findings of the current study suggest that orphans are no more at risk for developing Substance Abuse Disorder and no less intellectually capable than non-orphans.

Substance use among children experiencing extreme poverty is found to be a great burden in many previous studies. Researchers from New Delhi reported 59% substance abusers in a cross-sectional study done among runaway adolescent boys. Another study from New Delhi reported that more than half of the subjects had indulged in substance use. Research conducted in Hyderabad reported that substance use was found in 35% of the children. Research conducted in Egypt reported that nearly 91% of street children were misusing products containing volatile substances. Researchers from Colorado, USA reported that the rates of lifetime and recent substance use ranged from 66% to 90% respectively. Researchers from Mumbai reported that 80.98% of studied street children were substance abusers. According to the review by researchers from Moi University (Kenya), Indiana University (USA), Regenstrief Institute (USA) and University of Toronto (Canada), the prevalence of drug use among the millions of street children varies widely between countries: From 14% in Nigeria to 81% in India to an astronomical 92% in Honduras and Brazil.

The present study on substance use among orphans and non-orphans finds that there is no significant difference in the use of illegal drugs and alcohol between the two groups. In fact, the total score for the SUQ for each and every participant is always an impressive '0' (minimum score).

There are several risk factors to substance use such as genetic predisposition, certain brain characteristics that can make someone more vulnerable to addictive substances than the average person, psychological factors (e.g., stress, personality traits like

high impulsivity or sensation seeking, depression, anxiety, eating disorders, personality and other psychiatric disorders), environmental influences (e.g., exposure to physical, sexual, or emotional abuse or trauma, substance use or addiction in the family or among peers, access to an addictive substance; exposure to popular culture references that encourage substance use), starting alcohol, nicotine or other drug use at an early age, poverty and lack of education, while it is impossible to determine if the risk factors mentioned above is present among the participants in the study for now, there are other factors which may have served a protective role against substance use:

First is *education*. An educated person is well aware of the consequences of wrong/illegal actions and he is less likely to get influenced and do something which is not legally/morally right. A survey conducted within various states of America that compared school seniors from 1981 and 1986 showed declining rates of substance abuse during the five-year period; however, the most significant decline was among students who had more educated parents — decreasing from 36.7 percent to 23.7 percent. Furthermore, the least significant change was among students whose parents did not attend high school — a mere 2.7 percent decrease from 25.4 percent to 22.7 percent. The current sample comprises of children studying in the 8th standard. Through their education, they may have been warned of the consequence of illegal substance abuse, which may have effect upon them, thus, resulting in a total abstinence from substance use.

Second is the *role of parents or a parental figure*: Parents are the strongest influence that children have against illegal drug use. Among the participants in the study, it is possible that their parents will have played a role, strongly counterbalancing the risk factors mentioned previously, such as halting the availability of drugs and alcohol to the children under their care, serving as religious and living mentor. In the case of the orphaned children

(sampled from the TNT Children Centre), despite the presence of a notable risk factor (poverty, or lack of 'distracting' needs), their 'Father', Dr. Sangthankima Sailo may have acted as a buffer against the various factors which could have predispose them to substance-use.

In a comparative study, Ethiopian children at the Jimma Community Orphanage between the ages of 5 and 14 years were given a battery of tests to assess their intellectual, social, and nutritional well-being relative to a group of family-reared controls. On two tests of intellectual ability, the Ravens Progressive Matrices and the Conservation test, the orphanage children performed as well as the family children. Children who entered the orphanage at an early age scored higher than those who entered later. Also, the orphanage children were more likely to be stunted but not more likely to be wasted than the family children. The former was attributed to the malnutrition experienced by children before they entered the orphanage, which in many cases was during the 1984 famine. Stunting was associated with lower Raven's scores. The generally favorable status of the orphanage children can largely be attributed to the no institutional orphanage rather than to their pre-orphanage family life.

The data from the present study finds that the orphanage children have an intellectual capacity that is not significantly lower than those of non-orphans. This may be due to the fact that:

- a) The environmental factors play a smaller role than biological and genetic factors for the determination of intelligence, or
- b) The children from both groups have more or less similar environmental backgrounds.

It must be taken note that non-probability sampling was used for this study. We cannot therefore, generalize from this study alone. Other researches may validate the conclusions.

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