

Siblings of Substance Abusers: The Moderating Role of Parental Warmth in Academic Problems

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Abstract

The study aims to elucidate perceived parental rejection in siblings of substance abusers and its role in their academic problems. The Mizo adolescents with their age ranging between 14 to 19 years, comprising of 290 (145 boys and 145 girls) having a drug-abusing sibling, 290 (145 boys and 145 girls) having an alcohol-abusing sibling and 290 (145 boys and 145 girls) having non-abusing sibling participated in the study. Results revealed significant 'sex', 'status', or their interaction effects on parental acceptance-rejection and academic problems. It was also found that paternal acceptance-rejection moderated the effect of having a drug-abusing sibling on academic problems for boys. Discussions highlighted the consequences of substance abuse problems on the family and the needs of other family members, especially adolescent siblings from parents in the wake of such problems within the family.

Keywords: Parenting, Rejection, Warmth, Acceptance, Psychoactive, Substance, Moderating

Introduction

Research on the impact of a substance abuser on the family has indicated that severe and enduring stress are experienced by the family members, which can result in high levels of physical and psychological morbidity (Orford, Natera, Davies, Nava, Mora, Rigby, Bradbury, Copello, and Velleman, 1998; Velleman, Bennett, Miller, Orford, and Tod, 1993). The family's struggle to cope with and solve the problem has been associated with immense stress and

conflict, not only between parent and child, but also between siblings. Relationships within the family seem to disintegrate, adding to the seemingly relentless negative impact of the problem (Barnard, 2005).

Although the impact of these substance abusers on the whole family has attracted research, the impact on the brothers and sisters (the siblings) has not attracted as much research attention. Recent studies have only started to identify parents and siblings as separate

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constructs within the family (Bank, Burraston, & Snyder, 2004). Siblings often report feeling guilty, shock, anger and dismay for a brother or sister's substance abuse. They also reported fear of being blamed or judged for a sibling's substance abuse (Dorn, Ribbens & South, 1994; Orford, Natera, Copello, Atkinson, Moro & Velleman, 2005; Sayer-Jones, 2006).

Siblings of substance abusers are found to be present with a whole lot of psychological problems, such as low self esteem, self blame, helplessness, hopelessness, expectations of rejection and loss, overestimation of the amount of danger in the world, and/or expectation of maltreatment or abandonment from others. Psychological symptoms such as anorexia, depression, panic attacks, 'nervous breakdown', somatoform disorders, sleep disorders, increased oppositional behaviour, difficulty regulating emotion, poor impulse control, aggression, self destructive behaviour, dissociation, compulsive sexual behaviour, bingeing, purging and, sometimes, thoughts of wanting to die are reported (Barnard, 2005; Coffey, Saladin, Drobos, Brady, Dansky, and Kilpatrick, 2002; Dorn *et al.*, 1994; Davies, Hopkins & Clark, 2005; Greenblatt, 2000; Orford *et al.*, 2005; Sayer-Jones, 2006; Snyder, Bank, and Burraston, 2005; Velleman *et al.*, 1993). Of course academic problems are also a major concern when one of the siblings in the family is a substance abuser. Barnard (2005) noted that academic performance of siblings of drug

users often suffered and they resented this. Siblings also have to deal with the stigma of having an addicted sibling. They often have to lead dual lives and take on dual roles which can become very confusing (Lukens, Thorning & Lohrer, 2004).

Siblings of substance abusers are often overlooked or neglected by their parents. This adds on to the already accumulated stress of having to deal with a sibling's substance abuse (Barnard, 2005; Velleman *et al.*, 1993). The needs of siblings of substance abusers are frequently marginalized by a family's fixation on addressing the problems created by the abusing sibling. Interventions and research focus mainly on the abusing individual and not on the needs of other family members. The health and mental well-being of other siblings are often not recognised. Their needs are usually acknowledged only when the sibling is considered a possible resource in assisting the problem drug-using client. Non-abusing siblings tended to side themselves with their mothers, taking on defensive roles as a means to protect their mothers from the undeserved and burdensome problems arising from their sibling's substance use. A frequent side effect of such an alliance was the over-involvement of non-using siblings in family conflict, with the unfortunate outcome of intensifying relational problems within the family (Barnard, 2005).

Rohner (2004), among others, stressed the role of parenting in children's psychological adjustment in his

conceptualization the warmth dimension of parenting. This is a dimension or continuum on which all humans can be placed because everyone has experienced in childhood more or less love at the hands of major caregivers. One end of the continuum is marked by parental acceptance, which refers to the “warmth, affection, care, comfort, concern, nurturance, support, or simply love” that children can experience from their parents and other caregivers. The other end of the continuum is marked by parental rejection, which refers to the “absence or significant withdrawal of these feelings and behaviours and by the presence of a variety of physically and psychologically hurtful behaviours and affects”. Parental rejection can be experienced by any combination of four principal expressions: (1) cold and unaffectionate, the opposite of being warm and affectionate, (2) hostile and aggressive, (3) indifferent and neglecting, and (4) undifferentiated rejecting.

Rohner’s (2004) concept of parental acceptance-rejection syndrome strongly support the conclusion that children and adults who perceive themselves to be rejected tend to display several psychological maladjustments: hostility, aggression, emotional unresponsiveness; immature dependence, impaired self-esteem, impaired self-adequacy, emotional instability, ever-increasing anger, resentment and negative worldview. Paternal acceptance had been found to be related to children’s academic competence (Forehand & Nousiainen,

1993; Musitu & García, 2004). Paternal warmth also significantly predicted school adjustment and academic achievement (Chen, Liu, & Li, 2000). Bader (2001, 2008) found a strong correlation between parental acceptance and scholastic achievement. Putnick, Bornstein, Lansford, Malone, Pastorelli, Skinner, Oburu, (2014) found that higher perceived parental rejection predicted decreases in school performance. Adolescents’ perception of a warm and accepting quality in the relationship with their parents is remarkably important to maintaining their healthy psychological adjustment because their security and other emotional and psychosocial states are dependent on it (Rohner & Khaleque, 2005).

Objectives

Given the literature on the impact of substance abuse in the family, especially with regard to the siblings, and the concomitant effects on parenting, the objectives of the present study aims - (i) to highlight perceived parental acceptance-rejection in siblings of substance abusers and (ii) the moderating role of such perceived parental rejection or warmth in the academic problems of those having substance-abusing siblings.

Hypotheses

Based on the theoretical foundation the objectives set-forth, the following hypotheses were framed for the present study:

- (i) There will be significant difference between siblings of substance abuser

and non abuser on selected variables among the samples.

- (ii) There will be gender effect on selected variables under study.
- (iii) Independent and interaction effects were expected on the selected variables.

The present study is the first endeavour in the target population on the selected variables, and it is exploratory in nature.

Methodology

Sample: The Mizo adolescents with their age ranging between 14 to 19 years, comprising of 290 (145 boys and 145 girls) having drug-abusing sibling, 290 (145 boys and 145 girls) having alcohol-abusing sibling, and 290 (145 boys and 145 girls) having non-abusing sibling participated in the study, drawn from a randomly selected secondary and higher secondary schools in and around Aizawl, the capital city of Mizoram. The participants themselves identified the substance abuse status of their siblings by responding to ASSIST (WHO, 2000) that detects psychoactive substance use like alcohol and drugs, incorporated in the questionnaire booklet. All the participants have siblings (Mean number of siblings = 4.02). Though all participants were presently residing in different localities of Aizawl, the capital city of Mizoram, 42.7 % originally hailed from rural areas and the rest of 57.3 % hailed from urban Aizawl area. All participants had both their parents

living, and most of the fathers were employed (99 %) and literate (97.89 %), while 45.22 % of mothers were employed and literate (97.33 %). Most participants came from nuclear families (72.2 %), and the rest were from joint families (27.8 %). The three groups were found not to differ significantly in these demographic variables except in the status of having substance-abusing sibling - alcohol, drugs or normal.

Psychological Measures:

- (i) *Parental Acceptance – Rejection Questionnaire short forms for mothers and fathers (PARQ; Rohner, R.P &Khaleque, A, 2005):* The Parental Acceptance Rejection Questionnaire (PARQ-Short Form) is a 24 item, self report instrument (4 – point Likert - type scale) designed to measure individuals’ perception of acceptance-rejection with separate forms for father and mother. Parental acceptance-rejection is a bipolar dimension, with acceptance/warmth defining one end of the continuum and parental rejection defining the other. The PARQ consists of four subscales: (1) warmth/affection (WA) (2) hostility/aggression (HA) (3) indifference/neglect (IN) (4) undifferentiated rejection (UR); and totally, an *overall paternal or maternal acceptance-rejection score (TTR)*. High score indicates rejection and low score indicates acceptance/warmth.

(ii) *Academic Problems subscale of Adolescent Psychopathology Scale – Short Form (APS-SF; Reynolds, W.M., 2004)*: The Academic Problems subscale of the APS-SF is a 9-item self report measure that evaluates problems associated with academic difficulties in school, including getting into trouble and breaking the rules in school, distractibility and inattention in the classroom etc. It has three response choices of “Yes/No, Sometimes and Always” which were further scale scored. The higher the score, the more the academic problems.

Results and Discussions

Checks of psychometric adequacy to address the theoretical and methodological concerns of cross-cultural reliability and validity of measures of theoretical constructs (Witkin & Berry, 1975; Poortinga, 1997 etc.) revealed substantial item-total coefficients of correlation for both the father and mother versions of PARQ, and an order of adequate reliability ranging from .80 to .82 across the levels of analyses: adolescents having alcohol-abusing sibling, drug-abusing sibling and normal sibling. Academic Problems Scale also yielded more or less acceptable Cronbach’s alphas ranging from .64 to .73. Diagnostic tests of assumptions that underlie the application of parametric tests were also first checked and satisfied.

The results of Factorial ANOVA [2 Sex (male/female) X 3 Status of sibling’s substance abuse (alcohol, drug, normal)] given in Table-1 revealed significant main effect of ‘Sex’ indicating that compared to females, males generally perceived significantly more hostility/aggression ($M = 9.55$ for males; $M = 8.56$ for females), undifferentiated rejection ($M = 6.33$ for males; $M = 6.01$ for females) and total rejection ($M = 40.36$ for males; $M = 38.61$ for females) from fathers, a finding expected of a traditional patrilineal society like the Mizo where men are less involved in the care-giving of their children (Fente, 2012; Rohner and Veneziano, 2001). This finds support from a host of literature where boys tended to perceive higher rejection during childhood from their father than did girls (Hussain *et al.*, 2013; Ibrahim, 1988; Sentse *et al.*, 2009; Hussain & Munaf, 2012). Significant ‘Sex’ effect on HAMIg ($M = 8.60$ for males; $M = 8.12$ for females), indicated that males also perceived significantly more hostility/aggression from mothers compared to females. Apparently with boys typically engaging in more energetic activities, as in other cultures, it does not come as a surprise that Mizo boys should also perceive their primary caregivers (most likely their mother) as more impatient and reprimanding than in the case of girls of the same age (Demetriou & Christodoulides, 2006; Helewa, 1997).

Significant main effect of ‘Status’ (Alcohol, Drugs and Normal) were found

on HAFI, INF, URFI and TTRFI. Post hoc mean comparisons (Tukeyhsd) indicated that adolescents having drug-abusing sibling ($M = 9.36$) scored significantly higher than adolescents having normal sibling ($M = 8.67$) on paternal hostility/aggression (HAFI); adolescents having drug-abusing sibling ($M = 10.51$) scored significantly higher than adolescents having normal sibling ($M = 9.76$) on paternal indifference/neglect INF; adolescents having drug abusing sibling ($M = 6.39$) scored significantly higher than adolescents having normal sibling ($M = 5.89$) on paternal undifferentiated/rejection (URF), and adolescents having drug abusing sibling ($M = 40.51$) also scored significantly higher than adolescents having normal siblings ($M = 38.24$) on TTRFI, suggesting that adolescents having drug abusing sibling perceived significantly more rejection from fathers compared to adolescents having normal siblings.

A qualitative study of siblings of drug abusers by Barnard (2005) also revealed that siblings of drug abusers reported that they were 'estranged, sidelined, and that they were missing out on their parents' attention. Barnard (2005) also reported that fathers tend to withdraw from the family situation (son's addiction), and this in turn could be perceived as rejection by the non-abusing sibling. According to Cicirelli (1995), parents may become preoccupied with the ill child, giving little attention to the other children. The healthy children may be required to take on additional household

responsibilities that allowed them less time for engaging in their own preferred activities. Parents can easily become overwhelmed when one of their children has high needs whether resulting from chronic disability, disease, or addiction (Lamorey, 1999). However, significant main effect of "Status" was not found on any of the PARQ-Mother subscales or total scale. The fact that the status of having drug-abusing and not alcohol-abusing sibling showed significant difference in paternal rejection as compared to having normal siblings may indicate the severity with which drug abuse especially disrupts family life among the Mizo.

Significant interaction effect of "Sex X Status" were also found on URFI and TTRFI which revealed that among boys, siblings of drug-abusers ($M = 6.65$) scored significantly higher on paternal undifferentiated rejection (URF) than boys having normal siblings ($M = 6.19$) and siblings of alcohol-abusers ($M = 6.16$); whereas among girls, siblings of alcohol-abusers ($M = 6.29$) perceived significantly more paternal undifferentiated rejection than those having drug-abusing siblings ($M = 6.13$) and those having normal siblings ($M = 5.60$). The same pattern of interaction effects is also seen on total rejection from father wherein among boys, siblings of drug-abusers ($M = 41.67$) scored significantly higher on paternal total rejection than those having normal sibling ($M = 39.92$) and siblings of alcohol-abusers ($M = 39.48$); whereas among girls, siblings of alcohol-abusers ($M = 39.91$) scored

significantly higher than siblings of drug-abusers ($M = 39.36$) and those having normal sibling ($M=36.56$).

It may be noted that the drugs of abuse among the drug-abusing siblings in this study are almost all opioid derivatives, sedatives and inhalants (85.1 %) that typically shows up behaviourally in apathy, sedation, disinhibition, psychomotor retardation, impaired attention, impaired judgment, lethargy, argumentativeness, lability of mood, and interference with personal function. Although alcohol abusers also show many of these behaviours, they are more characteristic of aggressive behaviour instead of apathy, sedation and psychomotor retardation in opioid drug abusers. The apathetic nature of the drug-abusing sibling may not affect female siblings as much as the aggressive nature of alcohol-abusing siblings. Thus, it is perhaps more difficult to deal with an alcohol-abusing sibling for a girl than a more silent drug-abusing sibling.

Some research also indicated that parents are generally more concerned about illicit drug use than they are about alcohol use (Hayes *et al.*, 2004). Further, alcohol is likely to be perceived as more of a recreational substance by Mizo males, whereas illicit drugs are viewed with more seriousness. In the Mizo context, it has also been reported (UNODC & MSJE, 2004) that the supposed scarcity of alcohol due to MLTP (Mizoram Total Prohibition) Act, (1997) still in force during the research data collection period led to

higher instances of drug abuse. Hence, this could perhaps explain the tolerance of alcohol-abusing siblings by males and the intolerance of drug-abusing siblings by the adolescent boys.

To determine the moderating role of parental acceptance - rejection in the relationship between the status of having a substance-abusing sibling (Alcohol, Drugs and Normal control) and Academic Problems (ADP) among Mizo adolescents, hierarchical regression analyses were computed using SPSS 20, Interaction Software (Soper, 2013) and Hayes' PROCESS for SPSS (Fields, 2014) for Mizo adolescent boys and girls separately. The criterion variable, Academic Problems (ADP), was measured by the Adolescent Psychopathology sub-scale (APS; Reynolds, 2000). The predictor 'status' (Alcohol, Drugs and Normal) was first Dummy Coded into 'Alcodum' and 'Drugdum', with 'Normal' as the reference group. Necessary centering was done for the moderating variables of parental acceptance-rejection (TTRF and TTRM). The interaction terms between the predictors (Alcodum and Drugdum) and the potential moderator (TTRF) were also created.

The results summarized in (Table 2) revealed that among boys, 'status' alone explained only 1.2 % of the variance in Academic Problems. Paternal rejection significantly contributed 4.7 % of the variance explained. The addition of the interaction terms further added 1.6 % to the variance accounted for, bringing the

total proportion of explained variance in ADPIg to 7.5 %. Significant main effect of status (Alcodum, $\eta^2 = .108$; $p = .052$) was found, indicating that in Academic Problems, adolescent boys having alcohol-abusing sibling ($M = 7.40$) scored significantly higher than those having normal sibling ($M = 6.50$). Significant main effect of Paternal Rejection ($\eta^2 = .219$; $p = .000$) was found (Table 2), indicating

that academic problems (ADPIg) increases with increase in paternal rejection. Chen, Liu & Li (2000) also found that paternal warmth significantly predicted academic achievement. Obayan & Jimoh-Cook (1992) found that children who perceive their fathers as rejecting had low academic achievement. Paternal acceptance has also been found to be related to children's academic competence

(Forehand & Nousiainen, 1993; Musitu & García, 2004). Jones (2004) also found positive association between perceived relationship quality with father and academic achievement.

Interaction effect of ‘status’ (Drugdum) with the moderator variable ‘Paternal rejection’ (TTRF) on the criterion variable ‘Academic Problems’ (ADP) was found to be significant (DrugdumXZTTRF l g , $r^2 = .156$; $p = .018$), indicating that adolescent boys having normal sibling and adolescent boys having drug-abusing sibling scored significantly different in academic problems depending on different levels of paternal rejection (Table 2). Analysis of the significance of the simple slopes (Figure-1) at three levels ($M-1SD$, Average and $M+1SD$) indicated

that the simple slope (regression of the dependent variable on the independent variable at the level of the moderator for the current interaction line) was found to be significant only at $M-1SD$ level, that is, low level ($t = -3.129$; $p = .002$) of the moderator (TTRF). This indicates that only at low level of paternal rejection (akin to paternal warmth), status of having drug-abusing sibling (Drugdum) was negatively correlated with Academic Problems. That is, if an adolescent has a drug-abusing sibling (high score on Drugdum), he will have less academic problems if his father does not reject him (low score on TTRF). In other words, therefore, it could be predicted that even if boys had drug-abusing siblings, they were likely to have less academic problems if their fathers were perceived to be warm or not rejecting.

Table 2: Coefficients of regression model for Academic Problems on Status and paternal rejection for boys ($N = 435$)

Predictors	β	R^2	ΔR^2
Step 1			
Constant	0.839		
Alcodum	0.108	0.012	0.012
Drugdum	0.001		
Step 2			
Constant	0.837	0.059	.047**
ZTTRF l g	.219**		
Step 3			
Constant	0.837	0.075	.016*
Alcodum*ZTTRF l g Drugdum*ZTTRF l g	-0.002 .156*		

Note. ZTTRF = total paternal rejection. * $p < .05$; ** $p < .01$

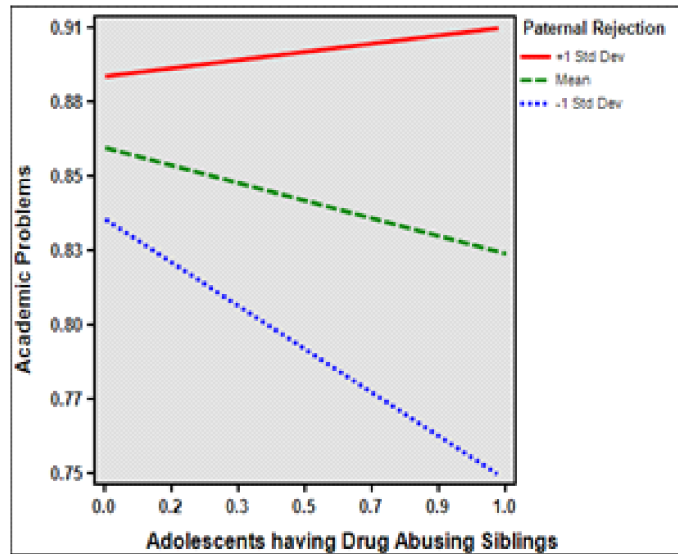


Figure: 1 – Moderating role of paternal rejection between status of having drug-abusing siblings and academic problems in adolescent boys.

Subsequent hierarchical regression analyses neither showed any significant moderating role of maternal rejection in boys', nor paternal or maternal rejection in girls' academic problems due to having substance-abusing siblings. However, significant main effect of status (Alcodum, $\beta = .108$; $p = .052$) indicated that in Academic Problems, adolescent boys having alcohol-abusing siblings ($M = 7.40$) scored significantly higher than those having normal siblings ($M = 6.50$). Significant main effect of Maternal rejection ($\beta = .204$; $p = .000$) also indicated that academic problems (ADPIg) in boys increases with increase in maternal rejection. For girls, significant main effect of paternal rejection ($\beta = .189$; $p = .000$) and maternal rejection ($\beta = .160$; $p = .001$) also

indicated that academic problems (ADPIg) increases with increase in paternal and maternal rejection. Research generally supports the effects of maternal involvement in academic achievement.

Mize and Pettit (1997) also found that maternal warmth predicted better adjustment, especially in academic performance. A study by Zellman and Waterman (1998) also confirmed that parent-school involvement in children's education is associated with positive educational outcomes. Parental involvement in children's education appeared to be associated with a range of positive outcomes, including fewer behaviour problems, lower drop-out rates, and higher student achievement (Comer, 1984; Muller, 1993; Stevenson and Baker,

1987). Lakshmi and Arora (2006) in Varanasi also found that parents who were perceived as being more accepting and using less control tended to have adolescents with higher academic success and competence. Coleman (1997) advocated that strong supportive families are significant in the academic success of children.

Summary and Conclusions

The psychometric checks of the behavioural measures (PARQ-Short Form for fathers and mothers and Academic Problem Scale) revealed their robustness for use in this population. Results indicated that boys perceived significantly more paternal and maternal hostility/aggression, paternal undifferentiated rejection and overall rejection than girls. It was also found that boys and girls having drug-abusing sibling significantly perceived more paternal rejection than boys and girls who had normal sibling. Further, among boys, siblings of drug abusers perceived significantly more paternal hostility/aggression, undifferentiated/rejection and total rejection whereas among girls, siblings of alcohol abusers perceive significantly more paternal hostility/aggression, undifferentiated/rejection and total rejection. A small but significant proportion of the variance in Academic Problems was explained by the status of having substance-abusing sibling in boys, but not in girls. Both paternal and maternal rejection also explained a considerable proportion of the variance in Academic Problems.

The moderating role of paternal rejection in the relationship between status of having drug-abusing sibling and academic problems in boys was found to be significant. It is a fact that every sibling in every family is not equally detrimentally affected by a member's drug abuse in the family. The finding in this study revealed that adolescent boys having drug-abusing sibling scored significantly lower on academic problems when paternal rejection was low (paternal acceptance/warmth). That is, paternal warmth appears to alleviate the academic problems likely to happen due to a sibling's drug-abuse. This is the foremost significance of this study considering the relevance of such information for society, specially the Mizo society whose many families are struggling to deal with the burdens of substance abuse and addiction, it being geographically located on the border of North East India, having to deal with narcotics trafficking intertwined with insurgencies in the neighbouring *Golden Triangle* (Goswami, 2014).

Gender differences on the effects of having alcohol-abusing sibling as compared to having drug-abusing sibling was found contrary to the expectations that boys and girls would be equally negatively impacted by a sibling's substance abuse, another significant point of this study. This may be due to the fact that intoxication of alcohol and the drugs of abuse in common in Mizoram (sedatives and opioids) give differential effects on the behaviour of the abusers. The apathetic nature of the drug-abusing sibling may not

affect female siblings as much as the aggressive nature of alcohol-abusing siblings. Thus, it is perhaps more difficult to deal with an alcohol-abusing brother or sister for a girl than a more silent drug-abusing sibling for a girl, highlighting the vulnerability of the adolescent girls.

Different types of substances create different stresses and demands on family members. Key areas of impact on relatives are physical and psychological health, finance and employment, social life and family relationships (Barnard, 2005). Literature review suggests that there is little research specifically focussing on the siblings of substance abusers. The results of this study have highlighted the importance of considering not only the needs of the brothers and sisters of the substance abusers but specifically that the parenting styles may alleviate or aggravate the impact of such sibling's substance abuse, as not everybody is equally affected and develop psychological problems. The findings of this study also support Rohner's (2004) concept of parental acceptance-rejection syndrome, which concludes that children and adults who perceive themselves to be rejected tend to display psychological maladjustments. It is hoped that such information will educate the Mizo population about the consequences and needs of other family members,

especially adolescent siblings, in the wake of substance abuse problems within the family.

A pressing limitation of the study was the restricted number of parenting variables that could be looked into as potential moderators of the relationship between having a substance-abusing sibling and other psychopathological variables taken in this study. Consideration of socio-cultural and religious factors could also throw light upon the support needs of such siblings to ease the pain of having to deal with substance-abuse problems in the family. It is suggested for future research that more parenting variables like permissiveness, restrictiveness, authoritarian, authoritative, and democratic parenting, overprotection and parental control be taken into consideration as well as the societal factors and spiritual well-being and co-dependency in the family that may play moderating roles in various internalizing and externalizing disorders of adolescent siblings of substance abusers. It is hoped that the results of this study will educate the Mizo population about the consequences and needs of family members other than the substance abuser, especially adolescent siblings, in the wake of substance abuse problems within the family.

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Siblings of Substance Abusers: The Moderating Role of Parental Warmth in Academic Problems

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“The difference between a successful person and others is not a lack of strength, not a lack of knowledge, but rather a lack of will.”

~ *Vince Lombardi*