IMPACT OF STRESS ON STUDENTS' MENTAL, PHYSICAL HEALTH AND ACADEMIC ACHIEVEMENT AT SECONDARY LEVEL DUE TO U.S DRONE STRIKES IN NORTH WAZIRISTAN AGENCY

MATI ULLAH¹, AHMADULLAH², ISHTIAQ AHMED³, SAQIB SHAHZAD⁴

ABSTRACT

OBJECTIVE: To identify the different effects on mental, physical health and academic achievement of students'of Secondary School Level in North Waziristan Agency due to U.S drone attacks.

STUDY DESIGN: An observational study

PLACE AND DURATION: Study was conducted over the students of Secondary Schools in North Waziristan Agency under the jurisdiction of Board of Intermediate &Secondary Education (BISE) Bannu, from 1st January 2012- to 31st December 2012.

METHODOLOGY: A novel questionnaire named as face-to-face questionnaire having Likert type scale of five options “Always”, “Frequently”, “Occasionally”, “Seldom” and “Never” carrying values 5,4,3,2 and 1 was used. The questioner designed to use for knowing the relationship between drone attacks’ psycho-trauma effects (Effects of Stress), physical health and students' academic Achievement.

RESULTS: The total numbers of 403 respondents from thirty Secondary Schools i.e. 15 Male and 15 Female Secondary Schools of both urban and rural areas in North Waziristan Agency were included. Most of the students always, occasionally of seldom suffer from stress (38.46%), depression (46.65%), anxiety (50.13%) and insecure (48.64%). Feeling of racial bias (58.57%), violent (73.94%), aggression (55.58%), and hatredness (44.66%) were always, frequently or occasionally observed among students from both gender. Prevalence of medical problems like hypertension, headache, insomnia memory disorder has been developed among students. Almost 54.35% students blame that their psychological and medical problems are due to Drone threat. As a result of this 53.09% students has started favoring terrorism and 47.64% consider Drone strikes threat is responsible for their poor academic performance.

CONCLUSION: Our study concluded that a high proportion of students are suffering psychological, psychiatric and medical problems due to constant threat of Drone strikes. This leads to feeling of insecurity, poor academic performance and sympathies towards terrorism in a quite high proportion.

KEYWORDS: Drone Attack, Students, Psychotrauma, Physical Health, Academic Achievement.

INTRODUCTION

All over the world, Drone strikes creating a controversy due to their particular toll i.e. striking unannounced and without any public acceptance of who is—and importantly, who is not—a target. Unfortunately, particularly for innocent victims, there is no one to take responsibility, apologize or address their sorrow. Moreover, for communities living under the constant watch of surveillance drones, there is no one to hold accountable for their fear. In Pakistan, the Bureau of Investigative Journalism has reported about 2,562 to 3,325 causalities due to drone strikes, which includes between 474 to 881 civilian deaths till September 2012 Civilian.¹ Deaths, injuries, displacement, and property loss caused by conflict are always traumatic for the population. In locations such as northern Pakistan, where drones often buzz overhead 24 hours a day, people live in constant fear of being hit.¹² The concerns over the increasing use of drones has so many reasons. The most important is the killing of innocent civilian, the psychological impact on civilians due to constant threat of drone attack and causalities of paramedics or civilian personnel who arrived at the scene to assist the injured.¹ In Pakistan, as reported by the Bureau of Investigative Journalism (BIJ) innocent civilian causalities include females, aging peoples, children, family members attending funerals, paramedical staff and people on rescue missions. The same Pattern of disproportionately collateral damage is also reported from Afghanistan, Yemen and Somalia.¹² The constant fear of a little control over their lives is further eroded by a lethal weapon which can strike at any time leading to a constant threat to them and their families. In this scenario, where male victims can sublimate their anger and grief to some extent by becoming fighters or suicide bomber, the females, children and aging population have no such outlet. If their male folk are killed, they have no choice except to endure the uncertainty in life due to continuing presence of the drone just overhead.¹² Historically, the Pashtun communities are considered as 'revenge-prone' nation. The Drone strikes have alienated most of the clans, sub-clans and extended families due to the killing of...
innocent civilians as a collateral damage.\(^7\) The long and short term impact of dead civilians and low-level militants killed by drone strikes poses a major problem because many of the victims deeply connected to the clan and tribes who will traditionally seek revenge against those who killed them.\(^9\) Moreover, the psychological impact of drone strikes become more problematic because traditionally the majority of Pashtun hold onto personal and collective vendettas for generations and they can or will retaliate ‘irrespective of time’.\(^5\) Recently, different studies established the psychological impact of drones. However, the two most influential studies are of great importance in this aspect investigating the link between the psychological impact of drone and radicalization of affected populations are the ‘Living Under Drones’ and Aliya Robin Deri’s\(^6\) study on American and Pakistani Reactions to the U.S. drone war. In these studies the association between Post-Traumatic Stress Disorder (PTSD) and drone strikes in tribal area were analyzed. In addition, they also studied how the psychological effects of trauma and anxiety caused by drone’s strikes are linked to cultural and historic norms in population, such as social framework that tie families and tribes together and honorable conduct in war. These studies focus the changes in behavior patterns among the communities which are targeted by drone strikes and also analyzed that why some of them have resorted to violence.\(^3\) But none of the study has focused the impact of drone strikes on young generation especially students. Students were suffering from stress because of U.S drone strikes in North Waziristan Agency due to which they showed poor academic grades at secondary level. Many students were physically and psychologically tortured because of stress and in such circumstances their academic score was adversely affected. The health of stressed students is negatively affected and they are placed in eleventh grade (poor grade). This study was conducted to identify the different effects on students’ Academic Achievement due to U.S drone attacks at Secondary Level in North Waziristan Agency.

**METHODOLOGY**

This observational study was conducted over the students of Secondary Schools in North Waziristan Agency under the jurisdiction of BISE Bannu irrespective of gender from 1\(^{st}\) January 2011 to 31\(^{st}\) December 2011. Stratified Random Sampling technique was used. The population was divided into two strata i.e. urban and rural. 30 Secondary Schools (15 urban and 15 rural) were selected randomly in which nine boys’ Secondary Schools and six girls’ Secondary Schools were urban. Similarly, six boys’ Secondary Schools and nine girls’ Secondary Schools were rural. The size of the sample was determined according to John Curry (1984) formula. All students who are willing to participate were included in study and those students who are unwilling or have given incomplete response were excluded from the study.

A novel questionnaire named as face-to-face questionnaire having Likert type scale of five options “Always”, “Frequently”, “Occasionally”, “Seldom” and “Never” carrying values 5,4,3,2 and 1 was used. All students were briefed and any terminologies beyond their understanding were explained in their language. For data analysis, Arithmetic Mean and Pearson Correlation were used through SPSS (Statistical Package for Social Sciences) version 16.0. Arithmetic Mean was used for identification of psycho trauma effects i.e. the effect of stress on students whereas Pearson Correlation was used for knowing the relationship between drone attacks’ psycho-trauma effects (Effects of Stress) and students’ academic Achievement.

**RESULTS**

A total of 403 students were interviewed from 30 Secondary Schools (15 urban and 15 rural). Among them 50.12% (n=202) were male and 49.88% (n=201) were females. Among them 18.11% (n=73) students always feel depression followed by occasional episode of depression 23.08% (n=93). Males students 31.68%, (n=64) were found more depressed as compared to females 4.48% (n=9). Anxiety is experienced by 44.55% (n=90) male in contrary to only 9.95% females (n=20). Almost half of female students 50.25% (n=101) never get stressed due to drone strikes as compared to only 36.14% (n=73) male students. Only 14.85% (n=30) male and 40.8% (n=82) female never feel insecure due to US drone attacks. Majority of students from both gender 36.98% (n=149) feel always or frequently tortured in this situation. Similarly, majority of students from both gender always or frequently developed cognitive disorders 39.09% (n=159) aggressive attitude 37.49% (n=154) hatred feelings 21.58% (n=91) feel racial biased 37.49% (n=154) or prejudice 28.29% (n=114) because of US drone attacks. (Table - I).

Frequency of different effects of drone strike on health of students were given in Table – II. It shows that about 48.63% (n=196) students from both sexes always or frequently were suffering from memory disorder and only 15.38% (n=62) has never experienced memory disorder. Similarly, 35.98% (n=145) students always or frequently has feeling of traumatic brain injury and 46.65% (n=192) had nightmares due to constant fear of drone strike. Majority of students from either sex frequent or always experienced 49.88% (n=202) breathing problems due to emission of gases or chemicals from drone missile explosion. Only 16.63% (n=67) has reported no adverse effect on breathing. A large number of male and females students always or frequently experienced headache 32.47% (n=154) vision problems 39.71% (n=160) skin diseases 28.86% (n=117) and ENT problems 46.65% (n=188). Diarrhea and abdominal cramps were always or frequently experienced in 28.79% (n=116) of students from both gender whereas only 26.35% (n=53) students never experienced these symptoms. Similarly indigestion (dyspepsia) is another main symptoms always or frequently experienced by 7.2% (n=29) and 26.55% (n=107) of students respectively.

Table – III shows the reasons of psychological, emotional and medical problems faced by the students due to constant fears of US Drone strikes. Quite a large number of students think that there psychological disorder are occasionally 15.14% (n=61) frequently 24.57% (n=99) and always 14.64% (n=59) due to US drone attacks. Almost half of the students from both gender
think that they face lack of concentration occasionally 14.14% (n=57), frequently 23.57% (n=95) and always 7.94% (n=32) due to fear of drone strikes and 47.64% (n=192) students from both sex claim that their academic performance is always badly affected due to this fear and only 4.71% (n=19) think that is not the cause of their poor academic performance. Almost more than half of students always 8.68% (n=35), frequently 30.27% (n=122) and occasionally 14.14% (n=57) fever terrorism due to constant threat of drone strikes and among them male is predominantly more in frequency.

### TABLE – I: STUDENTS’ RESPONSES REGARDING PSYCHOTAUMIC PROBLEMS CAUSED BY U.S. DRONE ATTACKS AT SECONDARY LEVEL IN NORTH WAZIRISTAN AGENCY (n=403)

<table>
<thead>
<tr>
<th>S. No</th>
<th>Students’ Responses</th>
<th>Male</th>
<th>Female</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I remain depressed due to U.S. drone strikes in my area.</td>
<td>74 (36.63%)</td>
<td>100 (49.75%)</td>
<td>3.07</td>
</tr>
<tr>
<td>2</td>
<td>I feel anxiety due to U.S. drone strikes.</td>
<td>73 (36.14%)</td>
<td>100 (49.75%)</td>
<td>2.17</td>
</tr>
<tr>
<td>3</td>
<td>I remain stressed due to U.S. drone strikes.</td>
<td>156 (38.71%)</td>
<td>115 (28.09%)</td>
<td>2.12</td>
</tr>
<tr>
<td>4</td>
<td>I feel insecure due to U.S. drone strikes.</td>
<td>80 (40.8%)</td>
<td>59 (29.35%)</td>
<td>1.31</td>
</tr>
<tr>
<td>5</td>
<td>I feel torture due to U.S. drone attacks.</td>
<td>80 (21.01%)</td>
<td>40 (19.9%)</td>
<td>1.37</td>
</tr>
<tr>
<td>6</td>
<td>I have developed cognitive disorders since U.S. drone attacks started in my area.</td>
<td>24 (11.88%)</td>
<td>87 (43.28%)</td>
<td>3.37</td>
</tr>
<tr>
<td>7</td>
<td>I am suffering from racial bias due to U.S. drone attack.</td>
<td>40 (19.8%)</td>
<td>47 (23.38%)</td>
<td>0.29</td>
</tr>
<tr>
<td>8</td>
<td>I have developed aggressive attitude due to U.S. drone attacks.</td>
<td>48 (23.76%)</td>
<td>59 (29.35%)</td>
<td>0.22</td>
</tr>
<tr>
<td>9</td>
<td>I confront violence because of U.S. drone attacks.</td>
<td>28 (13.86%)</td>
<td>47 (23.38%)</td>
<td>3.25</td>
</tr>
<tr>
<td>10</td>
<td>I have developed hatred feelings due to U.S. drone attacks.</td>
<td>72 (35.64%)</td>
<td>80 (39.8%)</td>
<td>2.88</td>
</tr>
<tr>
<td>11</td>
<td>I feel prejudice due to U.S. drone attacks.</td>
<td>65 (32.18%)</td>
<td>67 (33.33%)</td>
<td>3.04</td>
</tr>
</tbody>
</table>

### TABLE – II: STUDENTS’ RESPONSES REGARDING MEDICAL PROBLEMS CAUSED BY U.S. DRONE ATTACKS AT SECONDARY LEVEL IN NORTH WAZIRISTAN AGENCY (n=403)

<table>
<thead>
<tr>
<th>S. No</th>
<th>Students’ Responses</th>
<th>Male</th>
<th>Female</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am suffering from memory disorders due to U.S. drone attacks.</td>
<td>22 (10.89%)</td>
<td>40 (19.9%)</td>
<td>3.27</td>
</tr>
<tr>
<td>2</td>
<td>I am suffering from traumatic brain injury due to U.S. drone attacks.</td>
<td>36 (17.82%)</td>
<td>44 (21.89%)</td>
<td>0.08</td>
</tr>
<tr>
<td>3</td>
<td>I have nightmares since U.S. drone attacks started in my area.</td>
<td>21 (10.4%)</td>
<td>43 (21.39%)</td>
<td>2.21</td>
</tr>
<tr>
<td>4</td>
<td>I am suffering from asthma due to poisonous gases and chemicals emitted from U.S. drone missiles.</td>
<td>31 (15.33%)</td>
<td>36 (17.91%)</td>
<td>3.36</td>
</tr>
<tr>
<td>5</td>
<td>I am suffering from body aches and pains due to U.S. drone attacks.</td>
<td>57 (28.22%)</td>
<td>65 (32.34%)</td>
<td>3.02</td>
</tr>
</tbody>
</table>
Ishtiaq Ahmed et al.  

among the students from both gender. Due to this stressful condition of constant threat of drone strikes almost 69.42% of students from both genders suffer from insomnia and nightmare. This very high prevalence is quite alarming among young students.

Stress, depression and anxiety worstly affect the student’s concentration and focusing ability towards their academics leading to poor academic scores. Studies show that continuous exposure to stressful condition among students of secondary school level leads to major serious problems such as mental disorders, depression, low self-esteem, anger, hopelessness...
and even suicidal tendencies. All these problems directly leads to increase family problems, academic failure and absenteeism from school etc.11,12 Among our study population, anxiety (44.55%), sense of insecurity (36.37%), cognitive disorders (39.09%) were commonly observed. Similarly, we have observed that frequency of hatred feelings (45.32%), feeling prejudice (28.29%) and racial biased (37.49%) were quite high among both genders.

In literature review has extensively reported the negative impact of stress and anxiety over the students. Wong and colleagues reported that the female students are more stressed and anxious as compared to male students while male students are more depressed than female students.13 Dahlin Higher Education Stress Inventory and Major Depression Inventory show that male students are more stressed and depressed than female students as reported by Dahlin and colleagues.14 Weber has observed that those students who suffer from stress and anxiety have very poor communication skills and they are mostly disliked by their peers due to which they confront multifarious difficulties in their life.15 There is negative impact of stress and depression on students' success. Hofer has reported that the depressed students secure lower average point and spend minimum time on homework.15 So a man with too much stress is both physically and mentally tortured. By analyzing the data, it is evident that the Students of North Waziristan Agency are feeling worse all the time and they are unhappy due to which their academic score is negatively influenced.

Continuous exposure to stress can develop more aggressive attitudes like anger, aggression, feel of injustice etc, which may leads to change in temperaments, emotional instability, behavior changes and even tendency towards violence even on minor disputes or issues.16–18 This leads to lack of self control and they shows anger, threatening behavior, hostility, verbal and relational aggression, even on minor disputes.16 All these attitudes lead to achievements of poor academic score at secondary level as well.14,16 These attitudes i.e. aggression (37.49%), traumatic brain injury (46.65%) and lack of concentration (45.65%) were reported in high frequency among the students of North Waziristan.

Russell and his colleagues has reported that the aggressive attitude is directly related to physical, social, emotional and cognitive problems among students and these students usually found angry and violent-minded.17 More tendencies towards crimes, violence, negative emotions were commonly observed among those students.18 At the other end these students may develop shyness, emotional instability, lack of interest in others and social phobia etc.19 Stressful conditions are also responsible for learning disabilities especially among teenagers. Moreover, lack of concentration, poor memory, communication skills as reported by Nelson et al.20 Low self-drive may vastly affect these students and even intelligent students who were use to achieve good scores in academics in past.20–23

Different studies has concluded that the chronic stress is also responsible for increase frequency of medical problems like, hypertension, cardiac diseases, headaches, cognitive disorder, lack of concentration, insomnia, excessive fatigue, poor memory, infertility, excessive aches and pain etc.24–27 These affected students are unable to focus on their studies and extracurricular activities in the institution.26 Alainehas reported that these affected students has become very careless because they feel that in uncertainty and stressed circumstances it is a futile to achieve their goals and aim.26,27 Acute diarrhea, abdominal cramps and indigestion like problems were commonly observed in younger students of North Waziristan Agency since the start of U.S drone strikes. Due to all these diarrhea problems students were extremely stressed and mentally disturbed which worstly affecting the mental development and physical fitness of students. This fact is also reported by Piquero et al in their study.18 In our study, about 28.79% students experience diarrhea or abdominal cramps. Similarly, indigestion (33.75%), ENT problems (46.63%), headache (32.47%) and vision problems (28.86%) were faced by quite a high proportion of both male and female students. All these factors lead to increased school absenteeism among students in North Waziristan Agency. Students were suffering from negative attitudes and emotions such as sadness, anger, rage because of unpredicted U.S drone strikes. Generalized aches, pains, insomnia, ENT problems, breathing problems, memory disturbances, abdominal cramps, diarrhea, indigestion etc are very much among students of North Waziristan Agency because of stress. Stress is also responsible for other psychotraumatic problems such as bad temper, social anxiety disorder, sadness and anger etc.

Several studies published in literature over the last decade with variable observations. Some reported that it is very effective as a tactic in counterterrorism strategy, whereas others believe that it has no or possibly a negative effect in countering terrorism strategy. Problems in assessment of effectiveness of drones include widely divergent definitions, a dearth of evidence, difficulties in measuring success, and the radical differences between case studies that make comparison and generalization a questionable exercise.14,16

However, there is no enough evidence which allow scholars, analysts, and policymakers to make general proclamation on the effectiveness of targeted killing by drones but it may provide the grounds to start a normative debate that whether such policies are appropriate or not. In addition, it is suggested that the policymakers and researchers should focus on gathering and improving the empirical data to advance decision making on counterterrorism tactics in the future to minimize the collateral damage and feeling of constant drone strike threat to civilian population. Some are of opinion that majority of the pervasive arguments against drone strikes come from those who find the policy distasteful, immoral, and illegal.28 In this context, even in making their moral/legal arguments, these approaches also tend to raise another major concern: targeted killing is ineffective because it causes more problems than it solves as it is also evident from our study also. So the policy of “named killing”/assassination brings about unsustainable consequences, such as undermining the social and economic infrastructures of the community.
CONCLUSION

Our study concluded that a high proportion of students are suffering psychological, psychiatric and medical problems due to constant threat of Drone strikes. This leads to feeling of insecurity, poor academic performance and sympathies towards terrorism in a quite high proportion.

REFERENCES