Causative risk factors of relapse in opium addicts after treatment and rehabilitation in internally displaced people of KPK, Pakistan

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ABSTRACT
Opium dependence is one of the serious and multidimensional problems. Millions of people are opium addicts throughout the world. The aim of this study was to determine the risk factors causing relapse in opium addicts in Internally Displaced People (IDPs). This experiment was conducted in the Drug Detoxification and Health Welfare research center, Bannu, KPK, Pakistan. Sociodemographics characteristics of IDPs were studied in this retrospective cross-sectional study. Questionnaire was specifically designed and total 41 relapsed individual’s histories of post treated IDPs were studied. Percentage of factors causing relapse in IDPs included stress in 36.59% individuals, family conflicts 19.51%, friends 12.20%, work load stress 09.76%, body aches 07.31%, sexual satisfaction 09.76% and fun 04.87%. Average time of relapse in IDPs was 6 months. Results revealed that stress was the most notorious factor directing IDPs towards relapse. It is concluded that attention must be paid on the crucial factors of stress to avoid relapse associated with opium dependence such as, family conflicts, personal, occupational and economical status.

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INTRODUCTION
Opium is quite familiar for analgesia, sleep induction and relief of bowels etc. [1, 2]. Pakistan is situated in an area which produces the most of the world’s opium containing morphine, heroin, and codeine. It is added that Pakistan is restrained with 70% of Afghanistan’s opium, which produces 80% of the world’s illegitimate opioids including morphine [3]. The raw form of opium is processed for various alkaloids like morphine (10%), papaverine (1%), codeine (0.5%), noscapine (0.5%) and thebaine (about 0.2%) [1, 2, 4].

In 2008 the World Health Organization (WHO) annual survey expressed that approximately 200 million people are opiate abusers worldwide [5]. In 2010 around 24-35 million adults globally of age ranging from 15-64 year used outlaw opiates [6]. It is estimated that 6.7 million people of Pakistan had used different controlled substances including misused of medicinal drugs, and 4.2 million people are addicts. Opiates are the second most abused drugs with the figure of 1.06 million addicts including 320000 opium abusers. after cannabis having 4 million users [7]. It was found that women mostly misused opioid-based painkillers [8]. Adaptive condition develop from a drug due to the con-
tinual administration on regular basis as may be termed as drug addiction [9] and according to American Society of Addiction Medicine (ASAM) public policy statement addiction can be defined as a chronic disease associated with brain wages, motivation, retentivity and similar circuitry which causes craving, and inability to refrain from drugs and disablement in behavior hold [10-13]. While relapse is considered as the complete return to the previous behavior of drug abuse after treatment and rehabilitation, leading to complete return of previous symptoms.

Many pathways have been suggested for addiction but the most studied one is the mesolimbic dopaminergic pathway. This pathway includes the dopaminergic neurons in the ventral tegmental area (VTA) of the midbrain, which aims the limbic forebrain in which the nucleus accumbens (NA) is mostly targeted [14]. Pathways involved in the drug addiction and drug dependence are also involved in the relapse. These pathways for drug addiction or dependence and relapse can be stimulated either directly by taking opioids or indirectly by stimuli which involves higher centers of the brain. Risk factors associated with relapse lead to increase of dopamine by direct or indirect pathways in the mesolimbic system thus enhancing craving for drugs [15,16].

Various factors are responsible for relapse of dependency and addiction behaviors. Up today, no study has been reported the causative risk factors responsible for relapse in internally displaced people, displaced due to terrorism and war on terror. Current study aimed to determine all those causative and risk factors in internally displaced people (IDPs), which make them prone to opium relapse.

**MATERIALS AND METHODS**

**Sample size**

Retrospective cross sectional study was conducted on data collected from January 2014 to November 2016 at rehabilitation center in Bannu, Khyber Pakhtunkhwa (KPK) Pakistan. The study was approved by the Kohat University of Science and Technology, Kohat. Out of 107 histories, relapse was found only in 52 histories. Out of these 52 histories, eleven individual’s Drug Abuse Screening Test (DAST) and questionnaire based histories were incompletely filled which were excluded from this study. Finally, 41 questionnaires based histories were selected and analyzed. All those patients with age limit 25-70 years who were properly diagnosed and confirmed by the psychiatrist as opium addicts and relapsed, were included in this study. Addicts who were addictive for substances not including opium were excluded from the study.

**Study DAST and questionnaires**

DAST test and researcher developed questionnaire was used in this study to extract data from the histories of individuals addicted to opium. Questions were about the Socio-demographic characteristics of IDPs such as gender, age, education, job, and some questions about factors associated with relapse, including occupational factors with six items (labor, unemployment, government servant, driver, self-business, house wife), economic factors with three items (poor, middle class, upper class), abuse factors with two items (opium, poly drug abuser) and education factor with two items (illiterate, educated). Psychiatrists help and under their supervision each participant had completed questionnaires. Faculty members of Department of Psychiatry had confirmed the content reliability of the questionnaires. In all consented IDPs relapse was common.

**RESULTS**

All Socio-demographic characteristics of IDPs were studied in order to find their possible link with addiction and relapse. Relapsed individuals with male gender were 97.56% and female were 2.44%. The age wise distribution was so that individual from 21-40 year was 51.21% and 41-60year were 41.46%. Illiterate individuals were 80.49% and 19.51% were educated. 87.80% subjects were poor and 12.20% were from middle class. The occupation wise distribution was such that labors were 58.53%, unemployed 21.95%, government servant 12.20%, housewife 02.44%, drivers 02.44%, and 02.44% were running their own business. Married individual’s count was 90.24% and 09.76% were unmarried. Single drug (Opium) abusers were 07.32% and opium in combination with other drugs Poly Drugs Abusers (PDAs) were 92.78%. All socio-demographics categoriza-

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Causative risk factors of relapse in opium addicts after treatment

From the questionnaire of opium dependents, some factors are strongly correlating with high percentage characteristics which can be considered responsible for relapse, include marital status where married were suffering more (90.24%) compared to unmarried. But this high percentage of married over unmarried is due to a common illogical solution and practice in this tribal region, that addicts are married for quitting drugs. 80.49% of those relapsed were illiterate. Poly drug abusers (opium in combination with other drugs) were 92.68%. Subjects relapsed within poverty level were 87.80%. Occupationally labors were suffering more (58.53%) as compared to other professions and 21.95% subjects were unemployed. Data extracted from relapse patient histories, the main key factors causing relapse are mention in Figure 1.

From patient’s histories the factors causing relapse in IDPs include stress as 36.59%, family conflicts 19.51%, fun 04.87%, friends 12.20%, sexual satisfaction 09.76%, work load 09.76% and body aches (to get relief from pain) 07.31%. An average time of relapse in IDPs was 6 months.

**DISCUSSION**
Opium mostly cultivated in Afghanistan which touches...
boundaries of Waziristan Agency in Pakistan. This Afghan-
istan-Pakistan borderline is the key area of production and
trafficking of opium. Due to opium smuggling, people of
tribal areas contacted with opium and easily become the vic-
tims of opium abuse. Because of war on terror by Pakistan
Army against the terrorist and militants in Waziristan Agen-
cy and other tribal areas, people migrated towards different
safe cities of Pakistan. They lost most of their loved ones,
relatives, lost homes and business etc. which make them
proone to fell severely in environmental stress. To fight with
stress 36.59% IDPs took support of opium abuse in combi-
nation with other drug [17, 18]. According to the Tension
releasing theory by Cappell and Greeley (1987) and other
studies also suggest that stress through coping mechanism
lead individuals towards relapse and opium users are mostly
in touch with the stressors events like unemployment, family
conflicts, death of life partner, siblings and parents etc. [19].

Findings of our study show family conflicts, poverty, rela-
tionship with addicted friends, living expenses, unem-
ployment, stress, sexual satisfaction, work load, relief from
body pain, fun, illiteracy and poly drug abuse etc. as the
most associated factors for the relapse of opium dependence
and the results are comparable to studies previously done [6,
16, 20, 21].

The studies suggest that friends play supportive and criti-
cal roles in encouraging to abuse drugs and are one of the
negative factors in relapse of drug abuse in IDPs. Friends
which are previously addicted and using different types of
substance for the purpose to feel well are risky for fresh
treated opioid addict [22, 23]. In findings the other most im-
portant factor in relapse of drug abuse, including were fami-
ly conflicts. Within their communities IDPs are exposed to
severe, chronic stress because of low economic status, pov-
erty and unemployment which enhance their psychological
distress and convince them for relapse of drug abuse to get
relief from stress, tensions and anxiety. The results also sug-
gest that family conflicts, unemployment, and illiteracy etc.
are directing paths toward stress in different ways which give
alarms to use substances in order to get rid of stress.
Some Individuals started the abuse journey because of
working more through the support of opiates. Others started
abusing because of the their communal approaches of anal-
gesics effect of the opiates, as they are used in various dis-
eases like cancer, to feel well and relieve from pain [24]. The
results also suggest that poly drug abusers relapse ratio is
high compared to single drug abusers and having past his-
tory of using more than one drug is the strong determinat
for relapse. Regular use and its euphoric effect was also one of
the contributing factors to addiction and relapse, and post
treated addict go toward relapse because of fun factor of
opiates. Opium causes the release of endogenous peptides
(endorphins) which binds with the opioid u-receptor and
trigger pleasurable feelings and euphoria. After treatment
people keep craving for such pleasurable sensation and fun
factor [25] which is also one of the cause of relapse in this
study.

Limitations
Sample size collected from the rehabilitation center of
Bannu, KPK, Pakistan, was small due to only consideration
of relapse which was found only in 52 patient histories out
of 107 histories. In 52 histories, 11 histories were incom-
plete; and finally remaining 41 histories with relapse were
analyzed for possible risk factors and were reported.

Ethical Approval and Participation Consent
All patients were willing to participate and patient con-
sent form was signed by every individual or theirs spouse.

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CONFLICTS OF INTEREST
The author(s) declare that there is no conflict of inter-
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