

**QUALITY OF LIFE AMONG PEOPLE WHO INJECT DRUGS  
ATTENDING METHADONE CLINIC IN DAR ES SALAAM,  
TANZANIA.**

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**MMed (Psychiatry and Mental Health) Dissertation  
Muhimbili University of Health and Allied Sciences  
October, 2013**

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**By**

**Omary Ubuguyu**

**A Dissertation Submitted in (Partial) Fulfilment of the Requirement for the Degree  
of Master of Medicine (Psychiatry and Mental Health) of  
Muhimbili University of Health and Allied Sciences.**

**Muhimbili University of Health and Allied Sciences  
October, 2013**

**CERTIFICATION**

The undersigned certify that they have read and hereby recommend for acceptance by Muhimbili University of Health and Allied Sciences a dissertation entitled *Quality of Life among People who Inject Drugs attending methadone clinic in Dar es Salaam, Tanzania* in partial fulfilment of the requirements for the degree of Master of Medicine (Psychiatry and Mental Health) of Muhimbili University of Health and Allied Sciences.

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**Dr. Jessie Mbwambo**

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(Co – Supervisor)

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**Date**

**DECLARATION AND COPYRIGHT**

I, **Omary Ubuguyu**, declare that this **dissertation** is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

**Signature** ..... **Date** .....

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**DEDICATION**

This work is dedicated to my late father Mwl. Said Omar Ubuguyu who inspired me a lot to be a hard worker and always to aim higher, also to my mother Asya Abdallah, my grandparents, my wife Aziza and children Heri and Faraja.

## ABSTRACT

**Introduction:** Injecting drug use is one of the emerging public health challenges that Sub-Saharan Africa is facing today. Most people who injecting drug (PWIDs) succumb to poor health conditions, including physical health, mental health and other social disadvantages. This is mostly due to dependency and other risky health behaviours which may include trading sex for drugs or money to buy drugs, sharing needles, injecting equipments or blood itself through “flash blood” or “vijipointi” injecting practises. Methadone Assisted Therapy (MAT) reduces dependency to opioid and therefore establishment of methadone clinic established at Muhimbili National hospital (MNH) two years ago with other interventions aim at reducing these risks and hence improves quality of life in this subpopulation.

**Objectives:** This study was designed to examine the Health Related Quality of Life (HRQOL) of people who inject drugs (PWIDs) attending Methadone clinic at Muhimbili National Hospital. Understanding clients’ own perspective of what changes have occurred and what those changes mean to their wellbeing was another important aspect of this study so as client centred approach should be applied when addressing their needs.

**Methods:** This was a pre-post longitudinal study and qualitative data collection method. Archived clients records were retrieved to obtain assessment information from electronic and paper database systems. Out of 385 clients records utilized at the baseline, 293 were compared to assess the change on HRQOL. A total of 21 participants were recruited for in depth interviews and focus group discussions. SF 12 MOS quality of life survey version 1 was used for assessment of HRQOL. Paired Student t – Test and Independent t – Test were used to compare the mean of HRQOL of participants before and after methadone treatment and to compare the mean HRQOL score of participants and known Normative HRQOL of standard Dar es Salaam population. Multiple linear regression analysis was conducted to examine the associations between HRQOL and socio–demographic factors, physiological and addiction related function factors.

**Results** A total of 385 of clients’ record were reviewed of which 348 (90.4%) were male. Only 293 (76.1%) of those records were re-evaluated after initiation of methadone treatment due to various reason related to loss to follow up or poor quality of data. Male

participants were older with the mean age of 34.12 years as compared to that of female of 30.43 years ( $p < 0.001$ ).

Overall HIV prevalence was 47.7% and that of female and male participants being 67.6%, 31.9% respectively, this difference between the two prevalence was statistically significant ( $p < 0.001$ ). There was statistically significant lower prevalence of hepatitis B (18.9% vs. 22.1%,  $p = 0.012$ ) and C (24.3% vs. 43.4%,  $p = 0.012$ ) for female participants as compared to their male counterparts. The mean scale score for all domains of HRQOL for PWIDs after methadone treatment were higher than before initiation of treatment. These were also higher than those of general population for Dar es Salaam except for social function scale where there was no difference and for general health scale in which the general population had a higher score. Increase in number of working days improved both Physical and Mental Composite Scale score by 0.132 and 0.131 standard units respectively. In addition, an increase in number of cognitive deficits impaired Physical Composite Scale score by 0.146 standard units while an increase in number of psychotic experiences impaired Mental Composite Scale score by 0.133 standard units. Moreover, participants appreciated the changes in various aspects of their lives such as health, safety, housing and majority of them associated poor health outcome in various areas of function with inability to control symptoms of heroin dependence.

**Conclusion:** Methadone assisted therapy improves Health Related Quality of Life of people who inject drugs. Clients appreciated the impact methadone therapy has on many areas of their lives, not limited to physical and mental health. Having a job improves both physical and mental components of quality of life whereas experiencing psychotic symptoms affect mental component and having cognitive impairment affect physical component of Quality of Life.

**Recommendation:** Scaling up of Methadone assisted therapy is needed to improve HRQOL of people who inject drugs. Thorough mental state examination and feasible occupational or income generating scheme needs to be designed to ensure the comprehensive nature of the intervention for better outcome of PWIDs. Further and bigger evaluation studies using extensive tools and large numbers of participants are required to exploring the dynamics of heroin addiction in this virgin community.

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**ACRONYMS**

AIDS	Acquired Immunodeficiency Syndrome
AMP	Adenomonophosphate
ARV	Anti-Retroviral drugs
ASI	Addiction Severity Index
cAMP	cyclic Adenylmonophosphate
CCP	Comprehensive Chemistry Panel
COWS	Clinical Opioid Withdrawal Scale
CHRP	Centre for Human Right Promotion
CTC	Care and Treatment Centre
DSM IV TR	Diagnostic Statistical Manual-IV, Text Revised
ESR	Erythrocyte Sedimentation Rate
FBP	Full Blood Picture
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
Hon.	Honorary
HRQOL	Health Related Quality Of Life
HTC	HIV Testing and Counselling
Lect.	Lecturer
MAT	Methadone Assisted Therapy
MD	Doctor of Medicine
MHIC	Muhimbili Health Information Centre
MMT	Methadone Maintenance Therapy
Mmed	Master's of Medicine
MNH	Muhimbili National Hospital
MOS	Medical Outcome Survey
MUHAS	Muhimbili University Health and Allied Sciences
NGO	Non-Government Organisation

PGAF	Pangaea Global AIDS Foundation
PWIDs	People Who Inject Drugs
PTB	Pulmonary Tuberculosis
QOL	Quality of life
SD	Standard deviation
SF	Short Form
STI	Sexually Transmitted Infection
TAPP	Tanzania AIDS Prevention Program
TB	Tuberculosis
TZ	Tanzania
UNAIDS	Joint United Nations programme on HIV/AIDS
UNODC	United Nation Office on Drugs & Crime.
USA	United State of America
WHO	World Health Organisation
WHOQOLBREF	World Health Organisation Quality of life scale short version.
YOVARIBE	Youth Volunteers Against Risk Behaviours

## **DEFINITION OF TERMS**

### **Heroin dependence**

Heroin dependence is defined as maladaptive pattern of heroin use characterized by a cluster of physiological, behavioural, and cognitive phenomena of which heroin use is given high priority despite of adverse consequences associated with it. According to DSM IV TR, dependence to any substance is defined as a maladaptive pattern of use, leading to clinically significant impairment or distress as manifested by three or more of the following occurring at any time in the same 12 month period: Tolerance, withdrawal, taking substance over the longer time than intended, persistent desire or unsuccessful attempt to cut down or control use, spending great deal of time in activities necessary to obtain or use substance or recover from it, giving up or reduce time for important social, occupational or recreational activities, and continuing use of substance despite of having knowledge on its adverse effects.

### **Heroin withdrawal**

Heroin withdrawal refers to the psychological and/or physiological conditions developed as a consequence of abstaining from taking heroin after prolonged use. According to DSM IV TR, there are 4 important criteria to diagnose heroin withdrawal. In criteria A, evidence of either cessation or reduction of heroin use that has been heavy and prolonged. In criteria B, three or more out of nine symptoms must be present. In criteria C, although significant distress or impairment in social, occupational or other important areas of functioning must be met, the symptoms in criteria B above should not be due to medical conditions or mental disorder (criteria D).

### **People Who Inject Drugs**

In this study people who inject drugs refers to all individual who use illicit or un-prescribed heroin in the form of injection. Individuals must also show features of chronic use such as old venous scar or phlebitis. They also must have recent needle marks prior to enrolment into methadone treatment.

**Flashblood:** Flashblood is an injecting practice when a syringe-full of blood passed from someone who has just injected heroin to someone else who injects it in lieu of heroin to curb for withdraw or craving for heroin.

**Vijipoint:** This refers to sharing of heroin on the single syringe in which PWIDs are sharing cubic mm calibrated on the syringe depending on the amount of money or effort contributed.

**Quality of life:** WHO defines quality of life (QOL) as the individual's perception of their position in life taken in the context of the culture and value systems where they live and in relation to their goals, expectations, standards and concerns. In this study this broader sense of wellbeing was well examined in focus group discussion and in in-depth interviews.

**Health related quality of life (HRQOL):** HRQOL is a concept in measuring wellbeing which usually use a self reported satisfaction with the domains that measure physical and mental health. HRQOL is a concept much more confined to medical conditions and its consequences on physical and mental health of an individual. In this document, HRQOL was measured using Quality metric health outcome instrument called SF-12 version 1 as a self reported measure on satisfaction with the individual's wellbeing.

## CHAPTER ONE

### 1.0 INTRODUCTION AND LITERATURE REVIEW

#### 1.1 INTRODUCTION

##### 1.1.1 QUALITY OF LIFE

Quality of Life is one of the important outcome measures used in implementation sciences to assess the effectiveness of an intervention or a program. The measure of Quality of Life can be used in a wide range of disciplines such as economics, social sciences, health and political sciences to measure the well being of a population. In the health sciences, Quality of Life reflects the definition of health by the World Health Organization (WHO), which is, health is a state of complete physical, mental and social well being and not merely absence of disease or infirmity.<sup>1</sup> In this context Quality of Life is described as the degree of satisfaction or sense, which is, of well being an individual has regarding a particular style of life or health status.<sup>2</sup> This is one of the useful measures used to assess overall improvement of an individual or group of individuals following a specific intervention.

Quality of Life gives a summary and provides an overall picture when measuring changes or effectiveness of a program. In the Wolfson's population data pyramid,<sup>3</sup> Quality of Life appears at the apex as the higher level aggregate measure or summary providing an overall picture when measuring effectiveness of an intervention. One of the important arguments on the importance of measuring quality of life was made by Denis G, Fryback,

*"A population health data system should certainly be built on as comprehensive set of health indicators as possible. But without higher level aggregate measures a list of indicators is just a list. It describes the details of health but does not offer summarization or evaluation of overall change. If some indicators show better health, some are unchanged, and some show worse health, then we are unable to make aggregate statements about whether in composite we are better off or not."*<sup>4</sup>

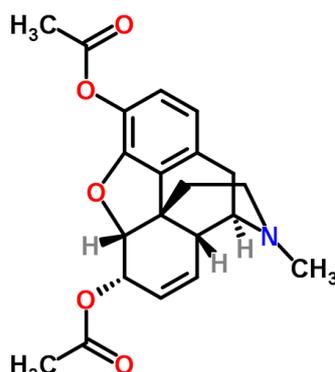
For almost 43 years scientists have been using various tools to measure Quality of Life. Depending on the needs and conveniences of the population to be assessed, different tools

have been designed. The commonest assessment tools designed are SF 36, WHO Quality of Life scale, Lancashire Quality of Life scale, Smithkline Beecham Quality of Life scale and many others. All of them aim at measuring the Quality of Life of a population or as an outcome measure of effectiveness of a program or an intervention. The measures on quality of life observed when assessing outcome they are just description on qualitative nature of the concept rather than quantitative measure of the outcome.

Quality of Life has been a very useful tool in objective assessment of the wellbeing of an individual or a population with conditions in which a single or a few indicators alone do not seem to give appreciable findings. Such conditions include chronic debilitating conditions, incurable diseases such as HIV/AIDS, substance use disorders and psychiatric conditions. Heroin use affects Quality of Life far more than many other substances. To some extent, even more than chronic medical conditions such as diabetes and hypertension.<sup>5</sup> When looking into indicators of health for people who inject drugs, they tend to have higher mortality rate, high prevalence of HIV, hepatitis C and B, poor nutritional and economic status. These and many other factors attributed by dependence nature of heroin may predispose individual to serious ill health behaviours and hence poor Quality of Life. To understand the dynamics of heroin addiction and its long-term consequences one needs to have an insight on neurobiology of opioid (heroin) addiction.

### **1.1.2 HEROIN ADDICTION**

Heroin is a trade name for a semi synthetic 3,6 diacetylesther of morphine derived from acetylation of morphine. It is a pro-active drug that needs to be converted by esterase enzymes in the liver, plasma, gut wall and central nervous system to active ingredients acetylmorphine and morphine. Heroin shares properties with other opiates and in particular with morphine except that it is approximately twice more potent and almost 200 times more lipid soluble than morphine.



**Figure 1: Structure of Heroin**

Opiates are compounds obtained or synthesized from products extracted from poppy plant scientifically known as *Papaver somniferum*. Opioids are classified depending on their origin, function or analgesic potency. Based on origin, there are three groups of opioid namely, naturally occurring opioid such as morphine, codeine and papavarine; semi-synthetic opioid like heroin, dihydrocodeine and buprenorphine; and synthetic opioid such as tramadol, hydromorphone, pentazocine and methadone. Opioids can also be classified depending on their effects on receptors, which may include pure agonists such as morphine, fentanyl and sufentanil; partial agonist for example buprenorphine; and agonist – antagonist such as pentazocine and pure antagonists like naloxone and naltrexone.

There are more than 20 distinct naturally occurring opioid peptides spreading throughout central nervous system and in some immune cells. There are exogenous and endogenous opioids which act on specific opioid receptors. There are three classes of the opioid receptors namely kappa, delta and mu. These are receptors localized in immune cells and are associated with inflammatory response, non-neuronal cells of gastrointestinal tract, dorsal root ganglion of peripheral nervous system, dorsal horn of spinal cord and in various areas and nuclei of the brain. Of interest are receptors found within amygdala and nucleus accumbens, the region associated with the reinforcing behaviour of the brain.<sup>6</sup> Opioid receptors are inhibitory and act via G-proteins. They inhibit adenylate cyclase, open potassium channels and block voltage-gated calcium channels thereby inhibiting the release of neurotransmitters such as 5-HT, GABA, glutamate and acetylcholine.<sup>7</sup>

Opioids can be administered through different routes depending on the type and intended effect. It can be administered through oral route, intramuscular, subcutaneous or intravenous routes; it can be sniffed (snorted) or smoked. Opioids are lipophilic which allow them to cross cell membranes and reach target tissues. When given orally most opioids undergo first pass effect in which drugs undergo metabolism in the liver before entering systemic circulation.<sup>8</sup>

Generally, a large proportion of opioid is metabolized in the liver in two phases. Phase 1 metabolism involving cytochrome P450 enzymes subjecting drugs to oxidation or hydrolysis. The most important cytochrome enzymes in this phase include CYP3A4 metabolising more than 50% of opioid and CYP2D6. Metabolites resulting from this phase can be active or inactive compounds. Then phase 2 metabolism mainly glucuronidation of opioid to soluble compound using diphosphate glucuronosyltransferase enzyme. The resultant conjugated compound is an inactive form and is excreted in urine.<sup>Error! Bookmark not defined.</sup><sup>Error! Bookmark not defined.</sup>

Opioids have several medical advantages. For example, morphine can be the most valuable analgesic for relief of severe pain, anaesthetics, anti-diarrhoea, and cough suppressants.<sup>3</sup> Despite being useful as drugs, opioids are very prone to abuse.<sup>9</sup> This is because they have euphoric effects and are associated with a sense of mental detachment and feelings of extremely wellbeing. Therefore, the users have a high risk of dependency. Opioids can also be used as cough suppressants, anaesthesia, anti-diarrhoea and recreational drugs. Opioids can also cause sedation and this may cause poor concentration, drowsiness, and sleep. At a high dose, an opioid may slow the activities at the respiratory centre with consequences such as respiratory arrest and death.

Two broad categories of opioid related disorders include the opioid induced disorders and opioid use disorders.<sup>10</sup> Both result from opioid dependence, and are of a significant public health importance. Heroin dependence can be explained in neurobiological and psychological basis. Like many other opioids, heroin tends to bind to opioid receptors on cell membranes. As a short term effect heroin use may cause up regulation of chemical messengers such as cyclic adenosine monophosphate (cAMP), alter level of

neurotransmitters especially dopamine by affecting re-absorption at postsynaptic membrane or alter gene expression in the neurone. Up regulation of cAMP can result in tolerance as more drugs will be required to produce cAMP and once drug is missing or available at lower dose, high cAMP level may trigger withdraw symptoms.<sup>11</sup> Individual who present with acute signs of overdose may include shortness of breath, dry mouth, constricted pupils or disorientation. Other heroin user may present with signs or symptoms of withdrawal characterized by increased heart rate, yawning, running nose, body paining and insomnia. These withdrawal symptoms can be objectively assessed using clinical opioid scale score.<sup>12</sup>

To overcome problems associated with heroin addiction or other condition associated with heroin use, psychological interventions such as behavioural motivational assessment, group therapy, and narcotic anonymous may be used. Some clients may benefit from both substitution and psychological interventions.

## **1.2 LITERATURE REVIEW**

Global estimates show that between 153 and 300 millions of world's adult population have used illicit drugs at least once in 2010.<sup>13</sup> Of those, between 16 and 38 million people were abusing opioid and about 11 to 21.1 million were predominantly heroin abusers.<sup>14</sup> The United Nations Office on Drugs and Crime (UNODC) global estimates show that, the magnitude of the problem differs from region to region. In Europe the estimated prevalence ranges from 3.29 to 3.82 million, America 2.29 to 2.44 million, Africa 0.68 to 2.93 million, East Africa 0.15 to 1.73 million and the lowest estimate in Oceania with 0.12 to 0.15 million people. The prevalence in African countries ranges from 0.03% in Sierra Leon to 1.8% in Mauritius.<sup>15</sup> In Africa, the global survey showed an increase in opiate seizure by 60% in 2004.<sup>16</sup> In the same report, East African countries such as Tanzania, Kenya, and Mozambique were among seven African countries with an increase of heroin and other opiates abuse in the region. These countries are the geographic location that exposes to drug trafficking routes to America and other countries in the West.<sup>16</sup>

### **1.2.1 Harm Reduction Strategies**

The first Methadone maintenance clinic for treatment of heroin addiction was established in 1964 in Rockefeller University in USA as a pilot clinic.<sup>17</sup> By the end 1999 more than 115,000 heroin addicts were recruited in more than 750 methadone clinic in 40 states in the USA.<sup>18,19</sup> Following reports from various methadone maintenance clinics on improvement of the Quality of Life and blood borne infections prevention among people who inject drugs (PWIDs), the United Nations office on Drugs and Crime (UNODC) and joint United Nations programme on HIV/AIDS (UNAIDS) responded to the problem by formulating a range of harm reduction strategies. In this formulation, opioid substitution using buprenorphine or methadone was one of the nine important components.<sup>20</sup> Clinics were established in several parts of the world. In Africa, only two countries established the public Methadone treatment. These were Mauritius in 2006 and Tanzania in 2010.<sup>21,22,23</sup>

### **1.2.2 Injecting Heroin Use and Quality of Life**

Heroin users tend to have lower health related Quality of Life scores compared to the general population or other patients with chronic conditions such as diabetes or hypertension.<sup>24</sup> As a result, their morbidity and mortality rate is significantly higher.<sup>25, 26</sup>

The mortality rate among heroin users in Europe was estimated to be 13 times higher than that of the matched age group in the general population.<sup>26</sup> In 1950s the average age at death among injecting heroin users in the USA population was 29 years. The records show that mortality rate in this sub-population rose from 7.2 per 10,000 deaths to 35.8 per 10,000 deaths,<sup>19</sup> about 75% of such deaths occur among individuals aged 15 to 35 years. In Amsterdam, it was estimated that 27% of drug users died within 20 years after they started regular heroin use. This was unrelated to HIV infections.<sup>27</sup> Almost similar outcomes were observed in a 37 years follow up study in Stockholm Sweden among heroin users. In this cohort, it was reported that heroin users die at an average age of 48.1 and 42.9 years for men and women respectively. This life expectancy was lower compared to that of the general population in Stockholm, 71.7 years for men and 76.3 years for women at the beginning of the study in 1967 and 77.8 years and 82.3 years for men and women respectively towards the end of the study in 2003.<sup>28</sup>

PWIDs are at a high risk of HIV infection. It is estimated that 0.8 to 6 million of such users are living with HIV.<sup>29</sup> HIV prevalence among injecting drug users is also higher in other regions of the world such as China (12%),<sup>30</sup> USA (16%),<sup>30</sup> and Russia (37%)<sup>30</sup> despite having relatively lower prevalence's of HIV in their general population. Heroin addicted people in sub Saharan Africa (SSA) are at unacceptably high risk of acquiring and transmitting HIV/AIDS. This is the region with generalized epidemic and harboured more than two thirds of people living with HIV/AIDS by 2008.<sup>31</sup> The prevalence of HIV/AIDS in this risky population in this region ranges from 5.5% in Nigeria and 12.4 % South Africa to as high as 42.9% in Kenya.<sup>16</sup> Compared to the general population in Kenya (7.8%), such prevalence among this risky population is high. In South Africa, however, the prevalence of HIV/AIDS among injecting drug users is lower than in the general population (16.9%),<sup>16</sup> creating diversity in HIV/AIDS epidemiology among the risky populations in SSA. Injecting drug use is estimated to account for nearly one-third of new infections outside sub-Saharan Africa fewer than 8% of injecting drug users receive HIV prevention services.<sup>32</sup> These findings signify that, HIV/AIDS is one of the very important physiological components to consider during the assessment of HRQOL.

Apart from HIV, PWIDs suffer from other diseases too. PWIDs are at an increased risk of hepatitis infections.<sup>33</sup> In the USA, intravenous drug use attributed almost 46%<sup>34</sup> of all

hepatitis cases. Such proportion is about 75% in Europe<sup>26</sup> and as high as 61.4% among current injectors in Nairobi compared to 3.8% of non-injectors.<sup>35</sup> The cases of bacterial endocarditis in USA attributed by injecting heroin use have been on an increase too. There is a significantly increased rate of hospitalization due to this disease among PWIDs by 38-66% in 2001-2003.<sup>36</sup> Tetanus, phlebitis, chronic wounds and other skin conditions are also reported to be common conditions among PWIDs. Psychiatric co-morbidity is also common in this sub-population with affective and anxiety being prominent presenting symptoms. Apart from depression and anxiety disorders,<sup>37</sup> other common conditions include schizophrenia, sleep disorders, antisocial personality disorders for men, and borderline personality disorders for women.<sup>38,39</sup>

A high prevalence of co-morbid poly-substance use behaviour among heroin users has been documented. It is estimated that 99.2% of PWIDs are co-morbid cigarette users.<sup>40</sup> Also, they have a high prevalence of cannabis use, cocaine, alcohol, and barbiturates.<sup>41</sup>

Most of heroin addicts have been reported to have poor nutritional status. This results from low intake of balanced diet. PWIDs also have high consumption of sweets.<sup>42</sup> They have poor health seeking behaviour and majorities are non-adherent on management protocols.

Heroin use has significant cost implication to individual and the society at large. In 1996 heroin addiction cost USA almost 21.9 billion USD of which, 53% accounted for loss of productivity, 24% criminal activities, 23% medical care, and 0.5% for social welfare.<sup>43</sup>

Despite the costs associated with running methadone clinics, a body of evidence on the use of methadone assisted therapy (MAT) has shown significant decrease frequencies of injecting heroin. The adherence to ARVs and reduction of other HIV risk behaviours has also been observed.<sup>44,45</sup> Provision of methadone and other interventions for psychosocial and management of other health related complications have proven to play a pivotal role to improve physical and mental health of such marginalized population.<sup>46</sup>

MAT has also been found to improve Quality of Life of drug users in different parts of the world. In China, a study in five methadone maintenance therapy clinics showed significant

improvement on physical and mental health. In this way, the Quality of Life of PWIDs improved.<sup>47</sup> Physical and psychological well being of PWIDs was also significantly improved with the use of MAT in Lithuania and Spain.<sup>48,49</sup>

### **1.2.3 Injecting Drug Use in Tanzania**

Tanzania is among the developing countries with a growing concern of illicit drug use and abuse with the prevalence of 0.09%.<sup>15,50</sup> The trend shows that men start injecting drugs at a relatively older age of 20 to 21 years compared to 19 to 20 years among female.<sup>51</sup> Although HIV/AIDS in Tanzania is a generalized epidemic, transmissions occurring among high-risk groups are unacceptably high. Prevalence of HIV in the PWIDs sub population in Dar es Salaam was 42% (n=534) in 2006 when that of general population was 7% in 2004.<sup>52</sup> There is still high prevalence of HIV in this subpopulation today, from the recent unpublished study done among 419 people who inject drugs in the streets of Dar Es Salaam shows that there is alarmingly high prevalence of HIV (51.1%), hepatitis C (75.6%) and depression (19.3%).<sup>53</sup> This complicates management of heroin addiction as well as the fight of HIV and other blood borne diseases.

### **1.2.4 Predictors of Poor Health Related Quality of Life**

Using the Wilson and Cleary clinical correlates HRQOL model, quality of life as a treatment outcome is influenced by interaction of several factors. Among these factors, physiological variables and addiction related functioning play an important role.<sup>54</sup> The physiological factors include all variables related to medical issues such as signs and symptoms of illnesses, risk, and protective behaviours.

Sexual and injecting risk behaviour such as needle sharing among PWIDs has been reported in many parts of the world.<sup>55</sup> Needle sharing was reported by 33% (n=82)<sup>56</sup> of PWIDs in Dar es Salaam. In another study by Mc Curdy in Dar es Salaam 57.4% (n=73)<sup>57</sup> of used needle and syringes collected in the neighbourhoods were contaminated with HIV. Risk behaviours such as use of “flash blood” and “vijipoint” put PWIDs in worryingly high risk of HIV transmission. The risk of infection after injection with an HIV contaminated syringe is estimated to be 0.63 – 2.4% (median 0.8% that is 1 in 125 injections).<sup>58</sup> In Dar es

Salaam, about 77% (n=360) of women heroin users traded sex for main income. Also, for one month they had 61.2-sex partners with an average of 80 vaginal sex encounters.<sup>56</sup>

PWIDs were also found to engage in criminal activities, to be isolated by health system, and they lack social and life skills. Such social disadvantages and dependency to illicit drugs may contribute to social isolation, lack of social support, and delineate themselves from the social super-structure that may lead into poor Quality of Life. Despite of being at higher risk of HIV/AIDS and other blood borne infections, most of PWIDs lack access to the basic health care services and especially for HIV/AIDS care. PWIDs also had lower education level attainment, lacked the formal employment, skills, and steady income. Because of drug dependency and lack of social and life skills, PWIDs are often among the marginalized population with social economic disadvantages.<sup>59,60</sup> Such factors may contribute to their poor health related Quality of Life.

### **1.3. STATEMENT OF THE PROBLEM**

Injecting drug users are among the marginalized sub-population which lack access to most of the basic services including health services. Findings show that there is a huge gap in provision of services to people who use drugs, according to UNODC 2008 report, only 12 – 30% of people who use drugs had access to treatment for addiction in the previous year (2007).<sup>31</sup> Hence the unmet need for treatment may reach as high as 33.5 million people. Furthermore only 5% of people who use drugs in Africa had access to services.<sup>61</sup>

The co-morbid conditions associated with the use of heroin such as HIV and hepatitis pose greater challenges to the wellbeing of clients themselves and to the general population. This is because they act as foci for the epidemic in the community as evidenced by increased prevalence of these diseases among injecting heroin users. While the prevalence of HIV is decreasing in the general population, it is increasing in the key population.

#### **1.4. RATIONALE**

Most of the heroin users are marginalized population with high illiteracy rate. A large proportion of them engage in criminal activities. Because of their co-morbid physical, psychiatric, and personality problems they are not involved in productivity. Therefore countries spend a significant amount of resources to care for the heroin addicts. To rationalize scaling up and cascading of care among people who inject drugs, scientific evidence is needed to show key stakeholders the impact these interventions have on addressing some of the problems associated with injecting drug use. The good example on usefulness of the interventions can be cited in China mainland where there was an improvement in Quality of Life of PWIDs after methadone treatment. This resulted in a national scale up of methadone clinics in the country. China had only 8 pilots clinics in 2004, by the end of 2009 there were 680 MAT clinics in 27 provinces.<sup>62</sup>

For the past two years PWIDs in Dar es Salaam have been treated in Methadone clinic at the Department of Psychiatry in Muhimbili National Hospital. This clinic has brought hope among many helpless drug users in the city. However, it is yet difficult to objectively say to what extent this service made impact in the lives or health of injecting drug users in Dar es Salaam. So findings from this study might help to raise awareness on the impact made on quality of life of our clients as well as rationalizing scaling up of care among people who use drugs in the country and African continent as a whole.

#### **1.5 THEORETICAL FRAMEWORK**

Based on the Wilson and Cleary conceptual models,<sup>54</sup> Quality of Life among drug users can be predicted from two important factors, which are physiological and addiction related functioning. In this model, physiological variables, which include symptoms associated with heroin use such as withdrawal symptoms and other signs and symptoms of medical conditions seem either to overlap or impair normal functioning and addiction related functions in terms of psychosocial experiences and consequently may determine HRQOL. In this model, methadone treatment breaks connection between all other physiological problems related to heroin use and resultant addiction related complexes and hence improves HRQOL scores. However, there are many factors that govern good outcome when one is introduced in a treatment program. Such factors may include clients'

satisfaction with the services that will determine adherence and other socio-cultural issues which have not been addressed before. Using the in depth interview and focus group discussion we will understand clients' point of view and their own perspective on how they perceive quality of life and what are the important areas of their concerns. The figure below shows the links between clinical variables and Health Related Quality of Life.

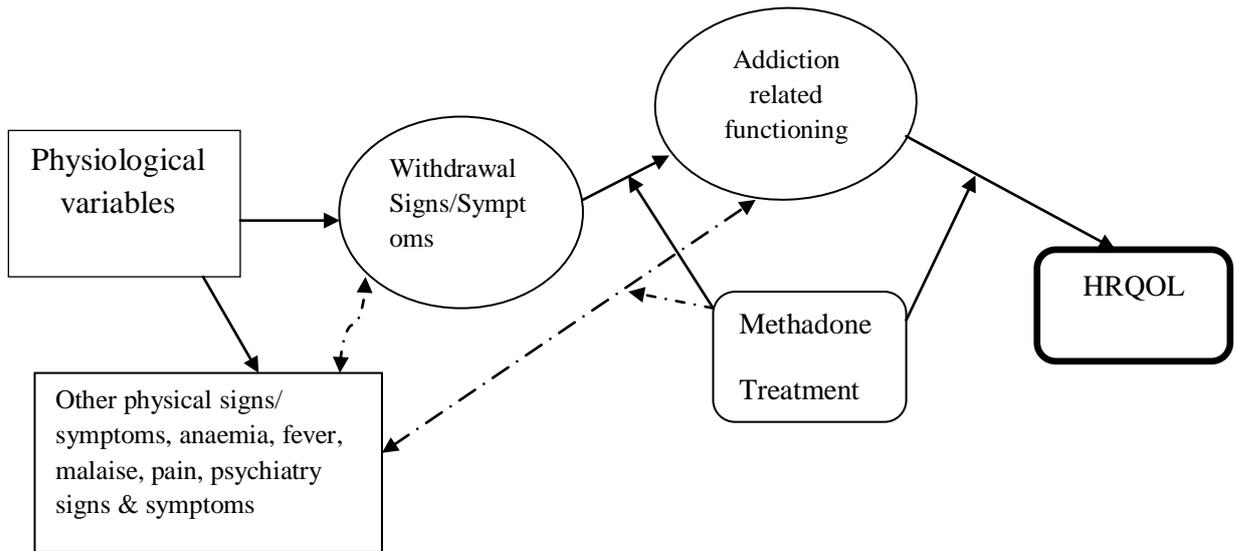


Figure 2: The modified Wilson and Cleary Schematic model linking clinical variables and Health Related Quality of Life.<sup>54</sup>

## **1.6 RESEARCH QUESTIONS**

- 1.0 Does the Health Related Quality of Life (HRQOL) of injecting heroin users improve after receiving services at Methadone (MAT) clinic at Muhimbili National Hospital (MNH), Dar es Salaam?
- 2.0 How are clients' socio-demographic, physiological and addiction related functioning factors associated with Health Related Quality of Life?
- 3.0 How do the clients perceive their well being after starting methadone treatment, what are the perceived factors attributed to the changed perceived sense of wellbeing if there are any?

## **1.7 HYPOTHESES**

- 1.0 HRQOL scale scores of People who inject drugs will improve after starting methadone treatment.
- 2.0 There is an association between factors such as medical, psychological, social and addiction related functioning and HRQOL scale scores.

## **1.8 OBJECTIVES**

### **1.8.1 Broad Objective**

To determine the effect of methadone treatment on Health Related Quality of Life (HRQOL) of PWIDs attending Methadone clinic at Muhimbili National Hospital in Dar es Salaam, Tanzania.

### **1.8.2 Specific Objectives**

- 1.0 To determine the changes on the health related quality of life of people who inject drugs after starting methadone treatment at Muhimbili National Hospital.
- 2.0 To determine the factors which affect health related quality of life of PWIDs attending Methadone clinic at Muhimbili National Hospital.
- 3.0 To understand clients' perceived determinants of changes of HRQOL among PWIDs attending methadone clinic at Muhimbili National Hospital.

## **CHAPTER TWO**

### **2.0 RESEARCH METHODS**

#### **2.1 Study Design**

This was a longitudinal pre-post study using both quantitative design utilizing clients' archived medical records and qualitative design using focus group discussions and in-depth interviews. The study involved adult patients attending the methadone clinic at the Department of Psychiatry and Mental Health of Muhimbili National Hospital as a part of opioid agonist therapy. The retrospective study design was used to allow utilization of already collected information of 400 targeted clients. When this study was designed, there was only one methadone clinic in the country and because of the slow nature of recruitment of clients it was impossible to do prospective study within the allocated time for this dissertation. To gain insight on the effectiveness of the intervention, a qualitative design was used.

#### **2.2 Description of the Study Area**

Tanzania, a country located in the Eastern part of Africa, has Gross National Income (GNI) per capita of 520 United States dollars (US\$). It was estimated to harbour 44.9 million people in 2012. The study was conducted in Dar es Salaam, Tanzania. Dar es Salaam a coastal region and a business capital of Tanzania was estimated to harbour 4.36 million inhabitants in 2012. The city is one of the fastest growing in the region with the growth rate of 5.6 percent with the population density of 3,133.<sup>63</sup>

The methadone clinic at the Department of Psychiatry and Mental Health of Muhimbili National Hospital in Dar es Salaam, Tanzania was established in February 2011. When established the clinic was stated to be a pilot clinic that would act as the stepping stone on the scaling up of such services in other parts of the country. The clinic receives support from Muhimbili University of Health and Allied Sciences, Pangaea Global AIDS Foundation (PGAF) and University of Texas through Tanzania AIDS Prevention Programs (TAPPs), government of the United Republic of Tanzania through Ministry of Health and

Social welfare, Drug Control Commission under Prime Minister's Office and local government and US government through United State President's Emergency Plan for AIDS Relief through Centre for Disease Control (PEPFAR/CDC). Other supporting organisations include local non government organisations such as Blue Cross society of Tanzania (BCS), Centre for Human Rights Promotion (CHRP), Youth Volunteers Against Risk Behaviours (YOVARIBE), Kimara Peers Educators (KPE) and international organisations such as Pangaea Global AIDS Foundation (PGAF).

### **2.3 Study Population**

This includes people who inject heroin attending Methadone clinic at Muhimbili National Hospital for a period of at least three months. From the anecdotal findings at Muhimbili Methadone clinic it was observed that most of the clients start to stabilize after the first month of the treatment. The duration was longer for the first batch of a 100 of MNH methadone clients to at least three months because of the slower and delayed titration which was practised during those old days due to the inexperience on provision of such services in this population. So at the third month most clients were assumed to be on the stable state and hence this study uses this ground to set timing for follow up data. As well clients are assessed at four spots, which are baseline or day one on the service, and then every month for the following three consecutive months.

Prior to recruitment at the MAT clinic, the client has to be screened for evidence of being heroin dependent. Also, a client is examined if she/he is using heroin by injecting mode by inspecting for the recent injecting marks and old venous scaring, wounds or phlebitis. Clients are also assessed for their readiness to quit and for evidence of sustained social support as "adherence partners" who will be responsible for the care of the client at home and assist them to attend clinic daily. During this period clients also receive health education on the risk associated with substance use, education on Human Immunodeficiency virus (HIV), Hepatitis B and C, pulmonary tuberculosis (PTB) and sexually transmitted infection (STI) screening. Clients are also provided with condoms, psychosocial intervention at the site and within the NGOs catchment areas, the storefronts and sometimes within the mobile HTC (HIV Testing and Counselling) services. At the

NGO sites they have also screened for the evidence of being dependent on heroin through use of injections. The PWIDs who meet the recruitment criteria enter a special 6 weeks preparatory phase for methadone treatment. Under this phase, they are provided with bleach kits, safe injecting practices information, psycho-education and motivation interventions. PWIDs who do not meet criteria are recruited into other ongoing psychosocial interventions.

At the MAT clinic in Muhimbili nurses, social workers and clinician do the screening procedure again to verify eligibility of the admission at the clinic using urine drug screening to confirm heroin and other substances use. Validation of use of heroin by injection and physical examination to assess the extent of physical morbidity is completed on the first day. There are minimum standard requirements that a client must meet to qualify and be recruited. A qualified client is subjected to the series of assessments comprising a total of eight diagnostic and screening tools instituted by nurses, social worker or psychologist, and clinicians. These assessments are conducted on a single day or within three days (in special cases). The assessments are the core data in the MAT database system. The information obtained is compiled at three different points. At the reception the client completes the bio data and demographic information. This is followed by the assessment nurse who assesses severity of addiction using two forms namely Addiction Severity Index assessment form (ASI) and Audit scale score form. This takes almost one hour for an experienced nurse. Then a client has to pass to a programme social worker who uses SF 12 to assess quality of life of an individual followed by the brief motivational interventional assessment for alcohol and for substance use and sexual HIV risk behaviours. This assessment takes 45 – 60 minutes for an experienced staff. Finally client's comprehensive evaluation is done by a clinician by including thorough assessment of client's health, and then uses DSM IV TR assessment form to determine dependence. Then depending on the outcome of this assessment clients are prescribed methadone, or in case when patient presents with severe withdraw symptoms clinician prescribe methadone after just a quick assessment and then thorough assessment follow after client taken medication.

On subsequent visits, psychologist/social workers review clients as scheduled. For the first three months an individual will be assessed using the same tool after every one month. Other physical conditions diagnosed on the first visit or on subsequent visit will be dealt with by either a TAPP clinician or referrals will be made to specialized clinics depending on the condition of the client. Other investigations such as Full Blood Picture (FBP) and Erythrocyte Sedimentation Rate (ESR), Comprehensive Chemistry Panel (CCP), hepatitis panel, HIV testing and counselling, assessing for tuberculosis (TB) and any other test to confirm a clinical diagnosis whenever deemed necessary.

Because of the restriction guiding methadone prescriptions, clients must come every day for methadone dosing which is given by trained pharmacists under direct observed model. This is a day clinic so clients have to attend from 6 am to 2 pm every day. There is a routine schedule for clients to see clinicians or social worker depending on their specific needs; however they are free to ask to visit clinicians or social workers whenever deemed necessary. Routine and random urine drug screening is done to every client to assess for lapses and relapses. Furthermore concurrent substance use is assessed through this urine drug screening or using alcohol breathalyzers to check for level of alcohol. For those clients who don't adhere on management plans, they are scheduled to see a panel of health care providers which include case managers from NGO where client was recruited, a nurse, psychiatrist, social worker and psychologist. Clients are also encouraged to attend narcotic anonymous meetings and family meetings at the NGOs closer to their home. Treatment duration is scheduled for at least two consecutive years to have high chances of having good outcome.

Apart from taking methadone at MAT clinic, PWIDs are scheduled for regular activities including attending methadone anonymous meetings, family therapy or individual therapies here at Muhimbili or at the storefront (drop in centre), where peers or trained psychologists and social workers offer those services.

### **2.3.1 Inclusion criteria**

- All clients' records done within the first week after recruitment in methadone clinics for baseline data.

- All records obtained within three to six months after recruitment for follow up data.
- Records of clients aged 18 years and above.
- All clients who go through consent processes for qualitative research
- Those who had no mental illness or under intoxication state which impaired cognitive function.

### **2.3.2 Exclusion Criteria**

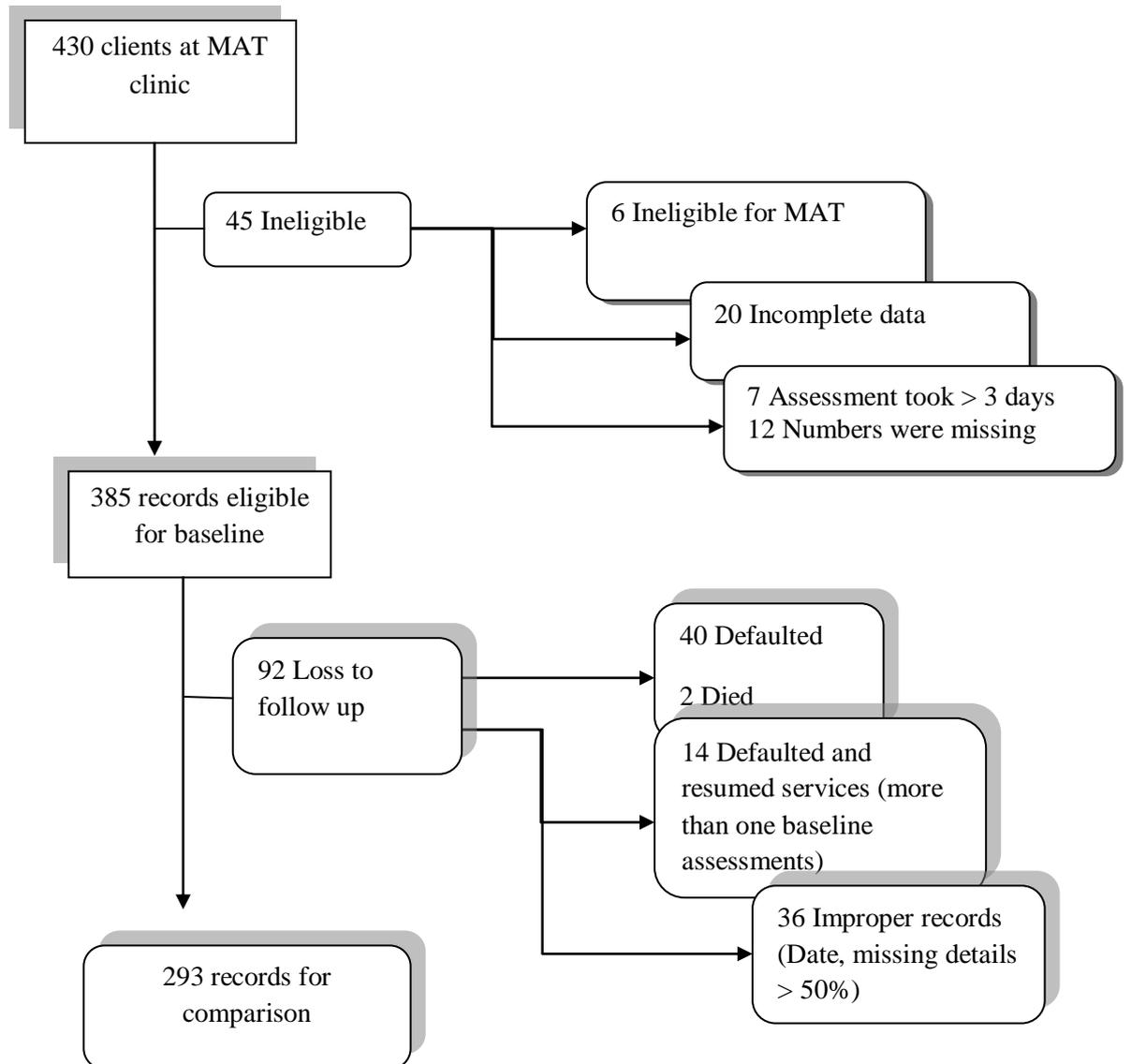
- Any record which took more than three days to complete the initial assessment.
- Any record missing more than 30% of information or missing completely set of assessment either by clinician, nurse or social worker.
- Those who have cognitive impairment due to any cause.

### **2.4 Sampling Techniques**

At the time of data collection in August 2012, methadone clinic had 430 clients whose three months records were obtained for the allocated study duration of four months. Convenience sampling method was used aiming at covering all available clinical data eligible for the study. Out of those records of 430 clients, reports of 385 clients met eligibility criteria for baseline assessment. However, at the end, data of only 293 clients were used for comparing changes at baseline and follow up.

Effort was made to compare data from the electronic database and the paper based system whenever deemed necessary. Two systems were consulted simultaneously to clarify or confirm date of assessment and confirming results. The records of 385 clients were used for the baseline evaluation of quality of life. The records of 92 clients whom were lost to follow up for various reasons were excluded from analysis of follow up data. Only those records of clients assessed in the specified period were used even if client defaulted from the clinic thereafter. Only records taken on their first contact with the clinic was used while their second set of records was excluded from the study even if they were still on treatment at the time of this study. Fourteen records were excluded on this ground. This was done for the simplicity of the study as having two baseline data sets might have complicated interpretation of the result findings.

**Figure 3: Sampling procedures for client's records at MAT clinic.**



## 2. 4.1 Sample size estimation

$$n = \frac{(r+1) \sigma^2 (Z_{1-\beta} + Z_{\alpha/2})^2}{r \text{ difference}^2}$$

where n = sample size

r = ratio of larger group to smaller group for paired data r = 1

$\sigma$  = standard deviation of the characteristic

difference = clinically meaningful difference in means of the outcome (0.5)

$Z_{1-\beta}$  = corresponds to power (0.84 = 80% power)

$Z_{\alpha/2}$  = corresponds to two tailed significant level (1.96 for  $\alpha = 0.05$ )

$$\text{Hence } n = \frac{2\sigma^2 (Z_{1-\beta} + Z_{\alpha/2})^2}{\text{difference}^2}$$

Then using statistical software for calculation of sample size for a two – tailed paired data set with power of 80%, significance level at  $\alpha = 0.05$  and the effect size (Cohen's d) = 0.3 – 0.5 for a medium to moderate . Then the sample size of the study was estimated using statistics calculator version 3.0, A – priori sample size calculator for Student's t – Test<sup>64</sup>. Cohen's d of 0.3 – 0.5 is mostly used in social sciences.<sup>65</sup>

Then the minimum sample size of 176 participants per each set of participants or equivalent to a total of 352 of all participants. Of all 385 clients records met eligibility criteria at the baseline only 293 met criteria for the comparative analysis.

For the qualitative study a total of 2 focus group discussions were conducted. One of them included 8 participants, 7 males and 1 female, with ages ranging from 26 – 46 years. These were recruited from the adult learning class. The other group consisted of 5 participants recruited from the clinic. All were males with ages ranging from 22 – 30 years. Eleven individuals were recruited for the in-depth interviews where 6 were female participants and 5 male participants.

## **2.5 Research Tools**

### **2.5.1 Data Collection Tools for quantitative longitudinal study**

#### **2.5.1.1 SF 12**

Health related quality of life is one of the most important outcome measures, as it assesses patients' level of function and their perceived wellbeing. It can predict morbidity and mortality associated with specific condition and hence can be used to assess the effectiveness of the intervention strategies. The quality of life survey short form SF 12 is adopted from a 36 items RAND Medical Outcome Survey (MOS) short form SF 36. The aim of developing SF 12 was to develop a user friendly tool that will give similar outcome as SF 36 on assessment of health related quality of life. From validation studies, SF 12 reproduce similar finding as SF 36 using the same domains and scoring system, however to achieve this, a large sample size of 500 participants or more is required.<sup>66,67,68</sup>

The SF 36 (HRQOL instrument) was translated to get a Kiswahili version which is equivalent to US English SF 36 in a large representative sample of urban population.<sup>69</sup> The findings showed that the median internal consistency reliability of the scale was 0.81 (range 0.70 – 0.92) and the normative mean SF 36 scale scores for all eight domains were 93.8 (SD=12.3) for physical function, 84.2 (SD=30.8) for Role functioning limited by physical health, 82.8 (SD=24.7) for Bodily pain, 62.9 (SD=18.5) for General health, 74.9 (SD=18.5) for Vitality, 88.2 (SD=18.5) for Social functioning, 86.3 (SD=30.8) for Role function limited by emotional problems, and mental health mean scale score of 82.2 (SD=18.5) for the Dar es Salaam population.<sup>69</sup> This scale has also been used among HIV/AIDS patients who were on ARVs attending CTC clinic in Kagera.<sup>70</sup>

#### **2.5.1.2 Socio-demographic factors and addiction related information**

Socio-demographic information included age, sex, marital status, employment status and income generation and drug related expenditure profiles. Information was collected from Addiction Severity Index fifth edition, which is used to assess severity of substance use. This instrument contains 150 questions on six subscales, covering severity on medical issues, employment and support, legal matters, family and social issues, as well as

psychological problems. The instrument has proven to be reliable in different setting for many years.

Measuring severity of addiction was beyond the scope of this study, as the logistics on securing electronic equipment for analysis of addiction severity took longer than specified time for data collection and analysis. Individual factor on each subscale was used when conducting bivariate and multiple regression analyses for medical status, drug and alcohol subscale, legal, family and psychiatry status.

### **2.5.1.3 Laboratory results**

Records of self disclosure or laboratory results for HIV, Hepatitis B and C were obtained from patient's file. These three conditions were included because they are regularly offered to all patients through provider initiated model of care. Other disease specific tests are not universal and are not offered regularly to clients, hence they were not analysed in this study.

### **2.5.2 Users Guides for discussions and interviews**

Researcher created a user guide for both group discussions and in-depth interviews to guide the scope of the discussion towards intended target on outcome of the methadone treatment. The guide also made easier references on identifying demographic characteristics of the study participants.

## **2.6 Data collection**

Records of these clients from electronic database and paper based systems were used for a retrospective study. Two sets of records were used mainly based on electronic information supplemented by paper work whenever deemed necessary. Assessment done within the first week of recruitment of the client at the Methadone clinic was referred to as baseline assessment ( $T_0$ ) and the one done on the third month was used for follow up assessment ( $T_1$ ).

From the pilot study it was observed that, the assessments are not scheduled as directed in standard operating procedures in a sense that, the subsequent assessments are not done on three consecutive months. However it was noted that there were enough records on subsequent reassessment in between third and sixth month after starting treatment. So the follow up data were obtained from the latest assessment done within this specified time periods.

## **2. 7 Data analysis**

Data were retrieved from Methadone clinic database system, cleaned and transferred to SPSS version 20 for analysis.<sup>71</sup> Paired Student t – Test was used to examine differences on HRQOL of participants before and after initiation of methadone treatment and Independent t – Test was used to compare mean HRQOL scale score of participants and known Normative HRQOL of standard Dar es Salaam population. Fisher test were also used to analyse for analysis on population distribution.

To answer the first research question on examining changes on HRQOL among PWIDs, individual response to each question were coded and to some questions scale was reversed to accommodate SF – 12 scoring algorithm on scale scores. Then baseline and follow up mean scale score for each domain was compared using paired Student t – Test where the two tailed significant score were set at  $\alpha = 0.05$ .

The HRQOL score calculated was also tested against Normative HRQOL Normative means estimated from representative sample of Dar es Salaam population using independent t – Test at the same significant level of 0.05. This statistical test was done to compare our study population against general population.

Chi-square and student t-test was used to compare different demographic and other addiction related factors between male and female participants (table 1-3). To examine associations between HRQOL and socio – demographic factors (i.e. age, sex, marital status, level of education and occupation), physiological (i.e. hospital admission, Hepatitis and HIV serostatus) and addiction related function (i.e. duration of use of alcohol, heroin and other drugs, psychiatric symptoms such as hallucinations, cognitive impairment, anxiety and symptoms of depression including suicidality), linear regression for bivariate

and multivariable analyses were done. Stepwise Linear regression model was used to determine the associations between the predictor variables and our outcome of interest which is Health Related Quality of Life (HRQOL). Only variables with  $p \leq 0.2$  in final model were included in multivariable analysis.

To understand perceived change of HRQOL and their associated factors, narrative analysis was done to understand ideas, feelings and experiences of the participants.

### **2.7 Ethical consideration**

Ethical clearance was granted by Muhimbili University of Health and Allied Sciences (MUHAS) Research and Publication Committee and permission letter to use hospital information was obtained from Executive Director through the Director of Medical Services and from the Head of Psychiatry Department and the Director of MAT clinic. Verbal and written consent was used to recruit participants for focus group discussion and in depth interview. Participation in the study was voluntary and confidentiality was maintained.

## CHAPTER THREE

### 3.0 RESULTS

#### 3.1: Longitudinal Quantitative Results:

##### 3.1.1 Demographic characteristics of study participants.

The first three tables summarize characteristics of the study participant as obtained from a modified ASI. While table one shows socio-demographic features, table 2 described substance use profile and table 3 summarizes medical and mental health status of the study participants.

A total of 385 reports of clients attending methadone clinic were studied of which 348 (90.4%) belonged to male patients. Records of 92 (23.9%) clients were excluded on the follow up analysis for various reasons as explained on the methodology. Findings shows that males were older than females with the mean ages of 34.12 (SD 5.969) and 30.43 (SD 5.723) respectively ( $p < 0.001$ ). In addition, a higher proportion of female participants (18.9%) were aged less than 25 years compared to male participants (3.2%) ( $p < 0.001$ ). There was no statistically significant difference on level of education ( $p=0.193$ ) and marital status ( $p=0.558$ ) between male and female participants (Table 1).

At baseline a higher proportion of female participants (37.8%) had no formal employment compared to male participants (20.1%) ( $p=0.018$ ). Also female participants had lower mean days of work in the past 30 days prior to assessment as compared to male participants ( $p=0.008$ ). Apart from that, female clients reported to have a lower amount of money earned from lawful activities compared to male clients ( $p=0.031$ ). Although female clients reported to earn more from illegal activities than males, there was no statistical significant difference between male and female participants ( $p=0.224$ ). Moreover, there was no significant difference between males and females on the amount of money spent to alcohol ( $p=0.746$ ) or heroin ( $p=0.105$ ) (Table 1).

Male participants had a significant longer lifetime mean duration of substance use as compared to female counterparts with mean duration of 12.38 (SD 6.47) and 9.33 (SD 5.66) years respectively ( $p=0.007$ ). Also males reported a longer lifetime experience of

heroin use with mean duration of 11.12 years (SD 6.16) compared to females 8.5 years (SD 5.19) ( $p=0.014$ ). There were no significant differences on the mean duration of recent use of all other substances including heroin, alcohol, barbiturates, sedatives including valium, cocaine and cannabis between males and females. (Table 2)

Compared to male participants, female participants had a higher proportion of symptoms of mental illnesses including depressive, anxiety, cognitive impairment and hallucinatory experiences; however these differences were not statistically significant. The overall HIV prevalence was 47.7% with high proportion of female participants tested positive for HIV compared to male participants (67.6% vs. 31.9%,  $p<0.001$ ). On the other hand, a higher proportion of male participants had hepatitis B (22.1% vs. 18.9%,  $p=0.012$ ) and hepatitis C (43.4% vs. 24.3%,  $p=0.012$ ) compared to female participants. (Table 3)

**Table 1: Socio demographic characteristics by sex of the study population (N=385)**

Variables	Male				Female				p-value
	n	(%)	mean	SD	n	%	mean	SD	
<b>Age</b>									
Mean age (years)	348	90.4	34.12	5.969	37	9.6	30.43	5.723	<0.001
<25	11	3.2			7	18.9			<0.001
25 - 34	182	52.3			19	51.4			
35 - 44	141	40.5			11	29.7			
>45	14	4.0			0	0.0			
<b>Education</b>									
No formal Education	50	14.4			10	27.0			0.193
Primary school	176	50.6			17	45.9			
O-level	97	27.9			9	24.3			
Post O-level*	25	7.2			1	2.70			
<b>Marrital status</b>									
Single	262	75.5			25	67.6			0.558
Married/cohabiting	56	16.1			9	24.3			
Separated	25	7.2			3	8.1			
Widow	4	1.2			0	0.00			
<b>Employment</b>									
No employment	70	20.1			14	37.8			0.018
Elementary work**	217	62.4			21	56.8			
Employed (self)	61	17.5			2	5.4			
Dayof work(recent)			19.15	13.49			12.86	14.31	0.008
Income (legal)			306566.09	634483.25			79189.19	203092	0.031
Income (Illegal)			99000	327414			167837	323686	0.224
Spent to Alcohol***			16125	89891			11297	33595	0.746
Spent to Heroin			549294	377022			660540	544105	0.105

\*= Formal training after O-level; \*\*= Simple and routine works eg selling goods in a street or doormen, selling metal or plastic scrapers;\*\*\*=Amount of money spent to buy alcohol or heroin.

**Table 2: Duration and types of substances used by sex (N = 385 )**

variable	Male			Female			p-value
	n	mean duration	SD	n	Mean duration	SD	
<b>Life time experience of Substance use (in years)</b>							
Any Substance	339	12.38	6.47	36	9.33	5.66	0.007
Alcohol	339	3.52	5.85	37	2.89	4.73	0.533
Heroin	339	11.12	6.16	36	8.50	5.19	0.014
<b>Recent history of substance use (past 30 days)</b>							
Alcohol	347	2.68	7.99	37	2.19	6.99	0.718
Heroin	347	28.93	5.29	37	29.19	4.93	0.779
Barbiturates	344	0.90	1.62	37	0.00	0.00	0.743
Sedative/Valium	347	1.87	6.75	37	2.92	8.61	0.385
Cocaine	344	0.19	1.82	37	0.92	4.96	0.068
Cannabis	344	10.72	13.84	37	6.59	11.16	0.080

**Table 3: Distribution of psychiatric, medical and social problems by sex ( N = 385)**

Variable	Status	Male		Female		p-value
		n	%	n	%	
<b>Depressive symptoms</b>	No	322	93.1	32	86.5	0.267
	Yes	24	6.9	5	13.5	
<b>Suicidal thoughts</b>	No	339	98	34	94.4	0.452
	Yes	7	2.0	2	5.6	
<b>Suicidal attempts</b>	No	343	99.1	37	100	1.000
	Yes	3	0.9	0	0	
<b>Serious anxiety symptoms</b>	No	321	92.8	32	86.5	0.302
	Yes	25	7.2	5	13.5	
<b>Experiences hallucinations</b>	No	334	96.5	35	94.6	0.892
	Yes	12	3.5	2	5.4	
<b>Cognitive impairment</b>	No	321	92.8	33	89.2	0.648
	Yes	25	7.2	4	10.8	
<b>Difficulties controlling violent behaviour</b>	No	340	98.3	37	100	0.912
	Yes	6	1.7	0	0	
<b>Previous use of psychotropic medication</b>	No	341	98.6	37	100	1.000
	Yes	5	1.4	0	0	
<b>HIV status</b>	Negative	143	41.1	6	16.2	<0.001
	Positive	111	31.9	25	67.6	
	Unknown	94	27	6	16.2	
<b>HBV</b>	Negative	161	46.3	8	21.6	0.012
	Positive	77	22.1	7	18.9	
	Unknown	110	31.6	22	59.5	
<b>HCV</b>	Negative	83	23.9	7	18.9	0.012
	Positive	151	43.4	9	24.3	
	Unknown	114	32.8	21	56.8	
<b>Satisfaction with living circumstances</b>	No	318	92.3	33	89.2	0.561
	Indifferent	2	0.6	1	2.7	
	Yes	28	8.1	3	8.1	

### 3.1.2 Result of Health Related Quality Of Life (HRQOL)

HRQOL 8 domains scale scores and mental and physical composite scale scores of people who inject drug before initiation of methadone treatment and that after stabilization 3 – 6 months after treatment were compared (Tables 4 and 5). Then the individual scale score before and after treatment were compared with the standardized mean scale scores for general population of Dar es salaam, obtained for representative sample of urban Tanzania population<sup>74</sup> (Table 6).

With the exception of score on General Health (GH) Scale, the Mean Scale scores of all 373 participants recruited at the baseline were above the average standard scale score of 50 (SD=10). There were no statistically significant differences on those scores when male and female participants were compared (Table 4).

Only 293 (76.1%) clients were compared when examining change in HRQOL before and after starting methadone treatment. It has been observed that, for those clients who were retained in the program for such a period of three to six months, their scores improved in all Mean Scales and as well as to their Physical and Mental Component Summary. General Health (GH), Vitality (VT) and Bodily Pain (BP) has shown very high margin of improvement with Mean Scale differences of 34.95 (95% CI: 32.24-37.66), 33.50 (95% CI: 30.01-37.00) and 32.83 (95% CI: 28.66-37.00) respectively. The least margin of change occurred on Social Functioning with the Mean Scale difference of 8.31 (95% CI: 3.31-13.30) (Table 5).

When comparing mean scale score of SF-12 for PWIDs prior to initiation of treatment and that of general population (table 6); PWIDs scored low in all scale as compared to general urban population. After stabilization on treatment, PWIDs surprisingly scored higher than general population in six scales except for two, which were physical function scale (PF) where there was no statistically significant difference ( $p=0.2393$ ) and in social functioning scale (SF) where general population scored higher than PWIDs on treatment ( $p<0.001$ ).

Table 7 below summarizes the findings on the associations between the predictor variables and HRQOL. Features of psychiatric or psychological symptoms were the dominate factors which affected scores of both mental and physical composite scales. As a single factor serious recent (within 30 days) experience of depressive or serious anxiety symptoms was

shown to affect scores of both mental and physical composite scale, however when adjusted for other factors in multivariate analyses, these two conditions didn't show to have statistically significant impact. Recent experience of feeling of poor concentration, difficulty to understand or remember things also seem to affect score of these two scales. Two factors affected PCS – 12 on multiple linear regression and these were experiencing cognitive deficits and recent number of working days. As for every one day increase in the number of experiencing cognitive deficits, the score on Physical composite Scale decreased by 0.146 units. On the other hand every single working day was associated with improved scores on PCS – 12 by 0.132 units or MCS – 12 by 0.035 units. Having a single day of hallucinatory experiences was associated with decreased MCS – 12 scores by 0.133 units. (Table 7)

**Table 4: Health Related Quality of Life at baseline by sex (N = 385)**

Variables	Male			Female			p-value
	n	mean	SD	n	mean	SD	
<b>PF</b>	338	72.98	22.34	34	67.65	24.25	0.189
<b>RP</b>	338	76.11	23.36	34	77.94	23.65	0.664
<b>RE</b>	339	75.52	22.46	34	74.26	21.75	0.756
<b>SF</b>	339	65.09	29.42	34	58.83	31.31	0.240
<b>MH</b>	339	67.99	22.19	34	61.03	23.37	0.083
<b>GH</b>	339	31.62	15.33	34	32.35	16.34	0.792
<b>BP</b>	339	56.52	30.63	34	54.12	28.93	0.663
<b>VT</b>	339	56.34	25.19	34	54.90	27.99	0.753
<b>PCS12</b>	337	59.33	15.83	34	58.01	15.92	0.645
<b>MCS12</b>	339	66.24	15.48	34	62.25	18.65	0.162

PF = Physical function, RP=role function (physical), RE=role functioning (emotional), SF=social functioning, MH=mental health domain, GH=general health, BP=bodily pain, VT=vitality, PCS12=Physical component summary, MCS12=Mental component summary.

**Table 5: Change on clients' Health Related Quality of Life after starting methadone treatment (N = 293)**

Variable	n	Baseline		Follow up		95% CI			p-value
		mean	SD	mean	SD	Mean diff	95% CI lower	95% CI upper	
<b>PF</b>	291	72.05	22.60	91.78	15.91	20.33	17.21	23.45	<0.001
<b>RE</b>	292	75.34	22.60	91.78	16.08	16.44	13.38	19.49	<0.001
<b>RP</b>	292	75.94	23.48	90.75	17.09	14.81	11.70	17.93	<0.001
<b>SF</b>	293	64.90	29.35	73.21	31.48	8.31	3.31	13.30	0.001
<b>MH</b>	293	66.64	22.01	90.96	16.36	24.31	21.40	27.24	<0.001
<b>GH</b>	293	31.95	15.10	66.89	20.07	34.95	32.24	37.66	<0.001
<b>BP</b>	293	55.43	30.20	88.26	22.48	32.83	28.66	37.00	<0.001
<b>VT</b>	293	54.72	24.78	88.23	22.09	33.50	30.01	37.00	<0.001
<b>PCS 12</b>	290	58.89	15.87	84.58	13.80	25.68	23.38	27.98	<0.001
<b>MCS 12</b>	292	65.39	15.38	86.08	14.78	20.69	18.42	22.98	<0.001

**Table 6: Comparing quality of life of people who inject drug and that of general population (N= 385)**

	<b>N</b>	<b>PF</b>	<b>RP</b>	<b>BP</b>	<b>GH</b>	<b>VT</b>	<b>SF</b>	<b>RE</b>	<b>MH</b>
<b>Population</b>	3802	93.8	84.2	82.8	62.9	74.9	88.2	86.3	82.2
<b>SD</b>		12.3	30.8	24.7	18.5	18.5	18.5	30.8	18.5
<b>Pre - MAT</b>	373	72.49	76.25	56.3	31.69	56.2	64.52	75.4	67.36
<b>SD</b>		22.56	23.56	30.45	15.4	25.41	29.61	22.37	22.34
<b>t-value</b>		17.998	6.031	16.29	36.633	13.857	15.16	8.641	12.408
<b>p-value</b>		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<b>Post - MAT</b>	293	91.78*	90.75**	88.26	66.89	88.23	73.21	91.78**	90.96
<b>SD</b>		20.33	17.09	22.48	20.07	22.09	31.48	16.08	16.36
<b>t-value</b>		1.179	-5.859	-3.977	-3.287	-10.061	8.045	-5.151	-8.745
<b>p-value</b>		0.2393	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001

\* n = 291

\*\* n = 292

**Table 7: Factors affecting Component Summary Scores of HRQOL**

<b>Factors</b>	<b>Unstandardized</b>				<b>Standardized</b>			
	<b>Beta</b>	<b>95.0% CI</b>		<b>p-value</b>	<b>Beta</b>	<b>95.0% CI</b>		<b>p-value</b>
		<b>Lower</b>	<b>Upper</b>			<b>Lower</b>	<b>Upper</b>	
<b>PHYSICAL COMPONENT SUMMARY SCORE (PCS - 12)</b>								
<b>Days of work</b>	0.089	0.062	0.296	0.003	0.132	0.035	0.271	0.011
<b>Medical problem</b>	-0.082	0.512	0.055	0.114	-0.083	-0.512	0.053	0.111
<b>Depressive symptoms</b>	-0.129	-13.996	-1.652	0.013	0.041	-7.991	13.012	0.639
<b>Anxiety Symptoms</b>	-0.159	-15.545	-3.459	0.002	-0.071	-14.698	6.187	0.423
<b>Cognitive deficits</b>	-0.195	1.987	-5.714	<0.001	-0.146	-17.261	-0.663	0.034
<b>Suicidal thoughts</b>	-0.083	0.015	1.987	0.112	0.009	-11.097	12.917	0.882
<b>Psychotic experiences</b>	-0.097	-0.583	0.015	0.062	-0.035	-0.412	0.210	0.524
<b>MENTAL COMPONENT SUMMARY SCORE (MCS - 12)</b>								
<b>Sex</b>	-0.073	-9.565	1.602	0.162	-0.034	-7.362	3.613	0.502
<b>Marrital status</b>	-0.103	-3.029	-0.020	0.047	-0.092	-2.850	0.114	0.070
<b>Days of work</b>	0.150	0.056	0.289	0.004	0.131	0.035	0.267	0.011
<b>Use of Cocaine</b>	-0.067	-1.140	0.239	0.200	-0.053	-1.034	0.320	0.300
<b>Depressive symptoms</b>	-0.121	-13.37	-1.210	0.019	0.028	-8.325	11.74	0.737
<b>Anxiety symptoms</b>	-0.135	-14.15	-2.016	0.009	-0.019	-11.48	9.259	0.833
<b>Cognitive deficits</b>	-0.169	-16.44	-4.166	0.001	-0.125	-15.76	0.618	0.070
<b>Psychotic experiences</b>	-0.176	-0.812	-0.221	0.001	-0.133	-0.695	-0.082	0.013

### **3.2: Group discussions and in depth interviews**

To get more insight on changes of Quality of Life and what that means to individual clients, group discussions and in depth interviews were conducted.

A total of 24 participants were recruited, 13 for group discussions and 11 in depth interviews. Only one female participant (7.6%) was recruited in group discussion and a total of six females were involved in depth interviews (54.5%). The mean age of female participants was 29.8 years while that of male participants was 31 years. Eight with no formal education were attending adult learning classes at the facility, only three has attended secondary school. Two participants were on their third and fifth months of TB treatments, while 8 reported to have hepatitis, 3 (2 females) were HIV positive on treatment, 3 didn't want to disclose their status.

#### **3.2.1 Measure of wellbeing**

Participants had their own ways of valuing their lives. There was no specific discussion on these measures but there was implied meaning of based on most of participants' arguments that they valued their well being. Most participants reflected their sense of having good or poor state of wellbeing by assessing popular opinions. They were assessing remarks made by relatives, friends or people around them. Many participants had this kind of attitude when they were responding to questions or contributing to ideas which assess a sense of wellbeing. A good example of this kind of attitude is best described by this 26 years old male client who is on his second year of treatment, who at the moment is among the peer community outreach worker; *"...at the moment after becoming community outreach worker, you might find even people on the street greet you with respect, asking.. how are you doing, how is your work, you see the respect on it.. I am very much pleased by this....."* he said.

Individual factors cut across four important areas, which were good state of health, ensured safety, finance management and good interpersonal relationship. Among the most important individual factors were freeing from any sort of threat, especially life threatening or being rejected by someone perceived to be of significant. Many were used to live in environment with constant threat to their lives or dignity. Living in environments where

there was constant threat relating to drugs or drug use behaviour were perceived as one of the most disturbing personal experience one had which threatened their sense of wellbeing. Many reported escaping drug related complications or situations which exposed them to death. Some of these situations were being killed by mobs while stealing for drugs or diseases like HIV/ AIDS acquired through sharing injecting equipments.

The best two examples on this were cited from two male participants. A 37 year old male, who had been injecting heroin for the past 15 years, used to live with his mother and 3 other siblings. He is a standard seven leaver and he was used by drug lords in town to test quality of heroin once one buys a new stock. *“Thank God that I am alive today, I used to test most of the drugs in town, dealers were paying me for quality assessment, but the turning point was when my colleague died from intoxication when he was testing for the new stock, we were together but fortunately I did not test my sample when I was informed that my friend died with the syringe on his hand,... I knew it had something to do with the drug itself, these days there are a lot of additives used to increase amount of the drugs, some are poisons....., from that moment I decided to quit and I have never tested heroin for a year and a half now..”*

Another male participant, 24 years primary school dropout he is current on treatment for HIV and TB, explained how lucky he is by staying alive to date. He narrated, *“....Doctor, all of my friends were killed, we used to steal day and night, people on the street and at around bus stand where we used to steal plotted a scheme of killing us one by one, when my physical condition start to worsen I decided to join treatment program, ever since I did not steal from anyone and I left that group which of course none of my friends is alive today..”*

All participants appreciated changes on interpersonal communication with their immediate relatives, partners, friends and neighbours. The following is a narrative from a 25 years old female participant who has never been to school and spent more than 10 years using drugs and trading sex. *“ initially we were not given any respect at all, even those who used to call you sister or brother they might pass without greeting you at all.....”* said the participant.

### 3.2.2 Perceived changes on wellbeing

All participants appreciated some sort of changes on their live, some were joking when they were remembering where they came from and what they have been through. Although there was no statistical measure to ascertain significance of those changes, but from what clients narrated, it sufficed to appreciate improved sense of wellbeing. All women reported to be involved on trading sex for drugs, and they used to have up to 10 sexual contacts in a day. None of them seemed to boost or enjoy this kind of activity, as one narrated “ .....*the customers used to mistreat us, they use you like a donkey do whatever they want and you have to accept because you need money for drugs..*” another participant calmly narrated her story as “ *Kwenda road* ( colloquial term used by sex workers meaning being on the street searching for the customers), *drugs and helping my grandmother was the only things I knew in my life*” she added, “*I used to steal from men when we had intercourse, while he is busy enjoying himself I always used to look for means of getting closer to their clothes and pick pocketing, yes he is enjoying while I am working...*” she concluded. With this kind of experiences many appreciated what they have achieved.

Being emancipated from homeless to construct three bedroom of your own, who will undermine such kind of triumph! Here is a story of 38 year old female, a grandmother and mother of 2 children. “*I never thought I would be called a “landlord”, I used to get a lot of money when I was trading sex ....., I also got inheritance when my father died, I spent every single cent I got on drugs, look now, in just two years, I have a house of my own..*”

### 3.2.3 Perceived factors which affect wellbeing

“*I used not to use any substance until when my boyfriend introduced heroin to me, I thought it is just like when people start using alcohol they can just decide to use or not,... after a while I realized that I couldn't quit because of “arosto” withdraw..*” lamented one of the participant who used heroin for two years before starting treatment 2 years ago. All participants admitted that both withdraw and craving nature of the drug made them continue using despite of their enormous effort to combat the addiction and craving. One of the 28 years old female participant was explaining how heroin addiction forced them to engage in high risk behaviours; when you are off drugs nothing is impossible, you will do

anything to make sure that you get heroin even if it needs you to steal from your own mother you will do". *"I wonder the miracle of this drug, no amount of money or drugs seem to be adequate, when you have money, you will keep on increasing amount until you run bankrupt"* supported by her colleague. *"We used to earn a lot, heroin makes you disconnected from the external world, we used to do things that one would have never imagined, some we used to roam around the entire city searching for used recycling materials, other were spending hours at bus stops looking for opportunities of getting money, our sisters were selling themselves, we did all of this just because of heroin. It is sad that, we can't generate income today and we have to depend to our parents who are not consistent on helping, but at least whatever small we are getting today we can save for the next day. I am thankful to this medication Methadone; as it does not only control withdraw but also reduces craving for the heroin"* concluded one of the participant.

## CHAPTER FOUR

### 4.1 DISCUSSION

These findings on the change in health related quality of life provide some supports to the fact that interventions aiming at reducing addiction and addiction related function can improve quality of life as depicted in Wilson and Clearly hypothesis. The study goes further to give clear insight on the clients own perspective to their personal experiences on the consequences of heroin use and how it affect their physical and mental health, relationships, economics and other social aspects including legal issues.

Among 385 participants in this study 348 (90.4%) were male. The male predominance in this sub population might have been caused by a day recruitment of methadone clients from local communities through non government organisations identified by program. Most of women drug users are found during the night when they are looking for customers for sex trade.

A significant high proportion of participants were single (75.5% for male and 67.6% female), had primary level of education (50.6% for male and 45.9% for female) and were engaging on elementary occupation. Having poor interpersonal communication skills and personality problems might explain having large proportion of participants with single marital status. This observation coincides to the fact that Social Function Scale (SF) was the only domain which PWIDs consistently scored lower than the general population. Majority having primary level of education and already explained poor social skills made the individuals in this class end up with the daily paid wages.

Higher proportion female participants reported to depend on income obtained from illegal activities compared to their male counter parts; however such differences were not statistically significant. Although in the statistics these findings seem to be insignificant, it helps to predict willingness of female participants on volunteering information. Repeatedly in group discussion or in interview female were willing to share their experiences including things which would have otherwise been taboo to speak out.

The mean lifetime duration of 8.5 years for female and 11.12 years for male shows the chronic nature of heroin addiction among study population. In the qualitative study, all participants agreed that the dependence nature of heroin and its withdrawal symptoms contributed a lot to driving them risking their lives. They engaged in reckless behaviour such as stealing, deceitful, trading sex and sharing needles and other injecting equipments.

The overall HIV prevalence of 47.7% among the study participants, that of female (67.6%) and 31.9% for male is among the highest recorded prevalence when comparing with general population for Dar es Salaam which is 8.9%.<sup>72</sup> Surprisingly female had lower prevalence of both Hepatitis B and C infection. There is a possibility of sexual mode of transmission of HIV and hepatitis in female as compared to male as this is supported by low prevalence of hepatitis. It is evident from this study that females have an average shorter duration of heroin use and hence the shorter exposure to injecting and sharing practises as compared to males. From the interview it was clear that female earn more money than their male counterparts, probably from sex trade. Compared to males, females start injecting late than males and this might also explain the low level of hepatitis in females. The HIV prevalence observed in this study population is almost 4 to 8 times National average, making injecting drug use one of the most high risk behaviour for HIV acquisition.

This study found an improvement in Mean Scale score of all eight domains of Health Related Quality of Life after three to six months retention on methadone treatment. Participants appreciated changes in many aspect of their lives, these included improvement on physical health, housing, improved financial management, improved safety and security, reduction in crime and improved social relationship. Participants also reported use of methadone has contributed a lot to those changes, as it helps to minimize withdrawal and craving for heroin.

Like in this study, changes on quality of life were also observed in a Chinese study<sup>73</sup> which analysed changes at 30 and 90 days intervals. In such study, significant changes on physical health was observed at 30 and 90 days ( $F=6.52$ ,  $p<0.005$ , and  $F=324.65$ ,  $p<0.005$  respectively). In a different study conducted in Lithuania,<sup>46</sup> a significant improvement in physical ( $\chi^2=11.0$ ;  $p=0.004$ ) and psychological ( $\chi^2=11.0$ ,  $p = 0.004$ ) components of life was observed after methadone assisted therapy among injecting drug users. In both studies,

researchers used a WHO-Quality of Life - short version (WHOQOL-BREF) to assess quality of life and changes observed thereof. In the study done in Oregon, the changes on quality of life for HIV infected opioid dependent clients improved after treatment with combined tablets of buprenorphine/naloxone. The improvements were observed in all domains of SF 12 at 3, 6, 9 and 12 months intervals.<sup>74</sup>

Cognitive impairment observed in this sub population correlated with poor outcome on Physical components of Health Related Quality of Life, whereas being at work seems to improve both components of HRQOL. On the other hand, having hallucinations has shown correlates with poor outcome on Mental Health aspect of Quality of Life. All of these psychiatric symptoms and other symptoms such as depression and anxiety as single factors seem to affect Quality of Life.

#### **4.2 Limitations**

Use of secondary data was one of the biggest challenges in this study. Researcher had no control on the quality of the data captured however more than 76.1% of records were cleaned and suffice the need.

Having small number of participant, which is less than 500 reduces the power of this study for almost 10% as when it could have been done using SF 36. Because of the comparative nature of this study design, change on quality of life was still able to be compared because the same individuals were subjected to the same tool. Because of this shortcoming the comparability of this study population and those normative means for Dar es Salaam general population were difficult to conclude.

Missing a validated and electronic scoring system for ASI has compromised standardised way of assessing association between addictions related functioning and quality of life outcome. However researcher tried to switch to stepwise regression model to minimize risk of skipping important factors.

The results of this study cannot be generalized to other settings because it was done in a clinical setting where conditions might be different from the rest.

**Strength of this study**

Using pre and post intervention design and mixed qualitative and quantitative design has enabled this study to observe changes overtime. This gave clear picture as it allowed researchers to observe quality of life of participants before they started treatment and after they have been on treatment.

Use of validated questionnaire and most extensively used assessment tool made easier comparison between this study and other studies in other part of the world.

## CHAPTER FIVE

### 5.0 CONCLUSION AND RECOMMENDATION

#### 5.1 Conclusion

This study found out that methadone assisted therapy improves quality of life of people who inject drugs. The mean score on SF-12 quality of life scale improved significantly in all domains after individual started treatment. A similar implication was observed when clients interviewed in which all of them attribute treatment with the improved wellbeing. The study also gives insight in associations between mental health symptoms such as having hallucinations and cognitive impairment affect negatively Quality of Life, whereas occupation improves quality of life. On the other hand during the in depth interviews and focus group discussions clients go further describing other factors such as increased access to health care, housing, good financial management and being respectful member of the society improve their wellbeing. Unlike some other interventions on management of addiction, at methadone clinic broad range of physical, mental and socio-economic aspects of clients are observed and taken care of which might explain the better treatment outcome.

#### 5.2 Recommendations

As the magnitude of heroin addiction is increasing and persistent high HIV rate among injecting heroin user is becoming prominent in our society, evidenced based approaches to assess outcome of injecting drugs and other HIV risk intervention strategies are needed.

Having comprehensive management plans whenever addressing needs for people who inject drug should cover their social, psychological and medical needs is very necessary in order to improve their HRQOL. Fully assessment of mental health is of paramount and immediate intervention is very important as mental health problems were very prominent factors associated with poor outcome.

Establishment of livelihood projects aiming at addressing issues of employment or any form of lawful income generating activity for MAT clinics or other addiction related

interventions is very important as it has been evident that having occupation improves quality of life across all domains.

Family therapy including conferences to understand family dynamics and resolving interpersonal conflicts should be given priority as evidenced from interviews and discussion that PWIDs reflect their wellbeing based on the stability on their relationships and values on the role they have in their communities. Positive attitude from the community possible might have significant impact on their sense of wellbeing.

Further study using more extensive tools and bigger sample size for both quantitative and qualitative design might enrich our profession with more knowledge and hence being more competent on handling challenges posed by heroin addiction and other substance of abuse.

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**APPENDICES**

**Appendix I: Consent Form (English Version)**

*CONSENT FORM TO PARTICIPATE IN FOCUS GROUP DISCUSSION:*

Title: Quality of life among people who inject drugs attending MAT clinic in Dar es Salaam, Tanzania.

Clients participation Number: \_\_\_\_\_

Group Number: \_\_\_\_\_

Venue: \_\_\_\_\_

Date: \_\_\_\_\_

Time of session: \_\_\_\_\_

Hello!

I am **Dr. Omary Ubuguyu** investigator / a student from department of Psychiatry & Mental health of Muhimbili University. Together with ..... research assistant we will be conducting a focus group discussion as a part of our research, mentioned above.

**The purpose of the discussion:**

Through this focus group discussion, investigator and the team will be able to have your opinions on your understanding of quality of life and to get your views on how does heroin use affected your perceived quality of life. We also anticipate to get your views on how does your injecting heroin use behaviour affected your physical and mental health, and how does this interfere with your perceived quality of life. As well we will be happy to know, how do you perceive your quality of life now after being on these services for quite sometimes, which things do you think has changed your well being or what do you wish to be adjusted for you to get better.

**Participation:**

Your participation in this study is under voluntarily basis, you have right not to participate or quit at any point during discussion, however we are highly encouraging you to

contribute during discussion so as to have a productive discussion. Refusal to participate or withdrawal warrants no penalty neither loss of benefits to which you are otherwise entitled.

**Benefit**

During discussion session the modulators will provide snacks and soft drinks otherwise there will be no material gained for participation. However for those who discovered to have physical, emotional and other psychosocial difficulties will be assisted accordingly. Again the findings from this discussion might be used by a researcher and MAT team to have insight on the things which may need changes or to be maintained of which might be of great value to participants and other clients.

**Confidentiality:**

This is open discussion which includes 8 – 10 participants plus two modulators, so we expect to have shared confidentiality on most of the things we are going to discuss. We expect all participants to adhere on our regulations of which issues of confidentiality is of highest priority, nevertheless in such an environment we cannot guarantee 100% confidentiality.

**Risk of participation:**

This discussion is intended to take 45 – 60 minutes, so we are expecting to take your valuable time at that margin. Apart from this, there is no physical or emotional harm on participation in this study.

However if you feel offended or humiliated in anyway during this discussion or at any time thereafter for being a participant in this study, or if you need clarification in anything concerning this study, please contact:-

The investigator Dr. Omary Ubuguyu

Department of Psychiatry, Muhimbili University of Health and Allied Sciences (MUHAS),  
S.L.P 65001 Dar es Salaam, cellphone number 0767259499, or

The Chairperson,

The College Research and Publications Committee, (MUHAS).

P.O.Box 65001, Dar es Salaam.

**Appendix II: Consent Form (Swahili Version)****FOMU YA MAKUBALIANO YA USHIRIKI KATIKA MAJADILIANO:**

Title: Quality of life among people who inject drugs attending MAT clinic in Dar es Salaam, Tanzania.

Namba ya mshiriki: \_\_\_\_\_

Namba ya kikundi: \_\_\_\_\_

Eneo la mjadala : \_\_\_\_\_

Tarehe: \_\_\_\_\_

Muda wa kipindi: \_\_\_\_\_

Habari!

Naitwa **Dr. Omary Ubuguyu** ni mwanafunzi wa chuo kikuu cha afya, Muhimbili (MUHAS) kutoka idara ya afya na magonjwa ya akili, ambaye pia ninaongoza utafiti huu. Nimeambatana na msaidizi katika utafiti huu ..... ambaye tutashirikiana naye katika kuongoza majadiliano.

**Lengo la mjadala huu:**

Kwa kupitia majadiliano haya mtafiti na timu yake watakuwa na uwezo wa kupata maoni na mtazamo wako juu ya uelewa wako tunapozungumzia hali ya ubora wa maisha, tungependa kujua maoni yako ni kwa jinsi / kiasi gani utumiaji wa heroini umeathiri hali hii ya ubora wa maisha. Ni matarajio yetu pia tutapata kufahamu ni kwa namna au kiasi gani matumizi ya madawa ya kulevya yameathiri afya yako ya mwili na akili na ni kwa kiasi gani hali hizi zimeathiri ubora wa maisha yako. Pia tutafarajika tukifahamu ubora wa maisha yako kwa kipindi hiki ambapo upo katika matibabu, pamoja na hili tungependa kujua ni vitu vipi hasa vimefanya uone hayo mabadiriko au ungepndelea nini kifanyie mabadiriko ili uweze kuifikia hali tarajiwa ya ubora wa maisha.

**Ushiriki:**

Ushiriki katika majadiliano haya ni la hiari, unao uwezo wa kukataa kushiriki au kujitoa muda wowote ule baada ya kuingia katika majadiliano, hata hivyo ili ushiriki wako ufikie lengo unaombwa uwe huru na ujitoe katika kuchangia. Tunakuhakikishia kuwa

hutoadhibiwa kwa kukataa au kujitoa katika ushiriki, pia utaendelea kupata haki zako zote za msingi.

**Faida za ushiriki.**

Wakati wa kipindi cha majadiliano, tutakuwa na viburudisho vya vinywaji baridi na vitafunwa, zaidi ya hapo hakutakuwa na faida yeyote ya kifedha au zawadi yeyote. Hata hivyo kwa mshiriki yeyote atakayebainika kuwa na matatizo ya kiafya au ya kisaikolojia na kijamii atapatiwa msaada kwa kadri ya mahitaji yake. Pia matokeo ya majadiliano haya yanaweza kutumiwa kuboresha huduma kwa mshiriki au wagonjwa wengine wanaopata tiba katika kituo chetu.

**Usiri wa taarifa za washiriki:**

haya ni majadiliano ya wazi ambayo yatahusisha kati ya washiriki 8 – 10 pamoja na waongoza kipindi, kwa hali hiyo tunatarajia usiri wa pamoja ndani ya kikundi. Tunatarajia washiriki watasimamia miiko ya ushiriki ambapo suala la usiri limepewa kipaumbele. Katika mazingira kama haya tunasikitika kuwa hatutoweza kukuhakikishia usiri wa asilimia mia moja.

**Madhara ya Ushiriki:**

majadiliano yatachukua kati ya dakika 45 – 60, hivyo tunategemea kutumia muda wako huo kwa majadiliano. Ukiachilia mbali haya hakuna uhatari wowote utakao tokana na ushiriki wako. Hata hivyo kama kwa kushiriki kwako katika mjadala huu utahisi kumepelekea kutotendewa haki, kudhalilishwa au kuumizwa kwa maana yeyote iwe wakati wa ushiriki au baada ya ushiriki, au ukiwa unahitaji ufafanuzi wowote juu ya utafiti huu. naomba uwasiliane na:-

Dr. Omary Ubuguyu

Idara ya afya na magonjwa ya akili, Chuo Kikuu cha Afya, Muhimbili. (MUHAS),

S.L.P 65001 Dar es Salaam, simu 0767259499, au

Mwenyekiti wa kamati ya utafiti wa binadamu ya chuo, (MUHAS).

S.L.P 65001, Dar es Salaam.



*For questions E12-17: How much money did you receive from the following sources in the past 30 days?*

<b>E12.</b>	<b>Employment?</b>	<b>TZS.</b> _____
• <i>Net or "take home" pay, include any money earned except illegal income</i>		
<b>E16</b>	<b>Mate, family, friends?</b>	<b>TZS.</b> _____
• <i>Money for personal expenses. Also code unreliable sources of income, windfalls (unexpected money) money from loans, inheritance. (Record <b>cash</b> payments only, etc.).</i>		
<b>E17</b>	<b>Illegal?</b>	<b>TZS.</b> _____
• <i>Cash obtained from drug dealing, stealing, selling stolen goods, prostitution, etc. Do not count estimated cash value of drugs or other items obtained illegally</i>		
<b>E18.</b>	<b>How many people depend on you for the majority of their food, shelter, etc.?</b>	<b>Number of people</b> [ ____ ]
• <i>Must be regularly depending on patient, do include alimony/child support, do not include the patient or self-supporting spouse, etc.</i>		
<b>E19.</b>	<b>How many days have you experienced employment problems in the past 30 days?</b>	<b>Number of days</b> [ ____ ]
• <i>Include inability to find work, if they are actively looking for work, or problems with present job in which that job is jeopardized. • If the patient has been incarcerated or detained all of the past 30 days, code "NN"</i>		
<b>C2. MEDICAL STATUS</b>		
<b>M1</b>	<b>How many times in your life have you been hospitalized for medical problems?</b>	[ ____ ]
• <i>Include overdoses and delirium tremens. Exclude detox, alcohol/drug, psychiatric treatment and childbirth (if no complications). Enter the number of <u>overnight</u> hospitalizations for medical problems.</i>		
<b>M3</b>	<b>Do you have any chronic medical problems which continue to interfere with your life?</b>	0 [ ] No 1 [ ] Yes
• <i>if "Yes", please give opinions.</i> • <i>A chronic medical condition is a serious physical condition that requires regular care, (i.e., medication, dietary restriction) preventing full advantage of their abilities.</i>		
<b>M4.</b>	<b>Has a health care provider recommended you take any medications on a regular basis for a physical problem?</b>	0 [ ] No 1 [ ] Yes
• <i>Must be for a medical condition; don't include psychiatric medicines. Include medicines prescribed whether or not the patient is currently taking them.</i>		
<b>M6.</b>	<b>How many days have you experienced medical problems in the past 30 days?</b>	[ ____ ]
<b>M7.</b>	<b>How troubled or bothered have you been by these medical problems in the past 30 days?</b>	[ ____ ]
• <i>Restrict response to problem days of Question M6.</i>		

<b>M8.</b>	<b>How important to you now is treatment for these medical problems?</b>	[ ___ ]
<b>M12</b>	<b>Have you ever been tested for hepatitis?</b>	0 [ ] No
		1 [ ] Yes
<b>M12b</b>	<b>If Yes, what was the result?</b>	“N” [ ] Never tested
		1 [ ] Hep Negative (not infected)
		2 [ ] Hep positive (infected)
		3 [ ] Don’t Know
<b>M12c</b>	<b>Would you like help obtaining a Hepatitis test??</b>	0 [ ] No
		1 [ ] Yes
		2 [ ] Not Sure
<b>M13</b>	<b>Have you ever been tested for HIV?</b>	0 [ ] No
		1 [ ] Yes
<b>M13b</b>	<b>If yes, what was the results?</b>	“N” [ ] Never tested
		1 [ ] HIV Negative(not infected)
		2 [ ] HIV positive (infected)
		3 [ ] Don’t know
<b>M13c</b>	<b>Would you like help obtaining an HIV test?</b>	0 [ ] No
		1 [ ] Yes
		2 [ ] Don’t know
<b>M14.</b>	<b>Are you currently pregnant?</b>	“N” [ ] Male
		0 [ ] No
		1 [ ] Yes
<b>M14a</b>	<b>If pregnant; do you have prenatal care?</b>	2 [ ] Not sure
		“N” [ ] Male
		0 [ ] No
<b>M14b</b>	<b>If unsure; would you like help obtaining a pregnancy test?</b>	1 [ ] Yes
		“N” [ ] Male
		0 [ ] No
<b>M14b</b>		1 [ ] Yes
<b>C4: ALCOHOL/DRUGS</b>		
<i>Note: Route of administration (ROA)</i>		
1	Oral (anything swallowed)	
2	Nasal (or any other sub- cutaneous membrane administration)	
3	Smoking	
4	Non-IV injection (such as IM or “skin popping”)	

5   Intravenous injection. (shooting directly into vein).				
• In cases where two or more routes are used, the most serious route should be coded. The routes listed are from least severe to most severe.				
S/#	TYPE OF DRUG	PAST 30 DAYS	LIFE TIME (years)	(ROA)
D1	Alcohol (any use at all, 30 days)			
D2	Alcohol - to intoxication			
D3	Heroin			
D4	Methadone			
D5	Other opioids/Analgesics			
D6	Barbiturates			
D7	Sedatives/Hypnotics/tranquilizers(Valium)			
D8	cocaine			
D9	Amphetamines/stimulants			
D10	Cannabis			
D11	Hallucinogens			
D12	Inhalants ( <i>thinner, petrol, glue etc</i> )			
D13	More than 1 substance (including alcohol)			
D14a.	Identify primary substance of abuse			[ ____ ]
D14b.	Identify secondary substance of abuse			[ ____ ]
• Interviewer should determine the primary and secondary drugs of abuse.				
D15.	How long was your most recent period of voluntary Abstinence from these major substance(s)?		Months[ __ __ ]	
• Most recent sobriety lasting at least one month. Periods of hospitalization/incarceration do <u>not</u> count. Periods of antabuse, methadone, or naltrexone use do count. • Code 00 = never abstinent.				
D16	How many months ago did this abstinence end?		Months[ __ __ ]	
• If D15 = 00= still abstinent, then D16 = NN.				
D17	How many times have you had: Alcohol DT's 'Delirium Tremens'?		#number of DT [ ____ ]	
• DTs occur 24-48 hours after last drink or significant decrease in alcohol intake, shaking, severe disorientation, fever, hallucinations, they usually require medical attention				
D19a	How many times in your life have you been treated for Alcohol or Drug abuse?		# HOW MANY TIMES[ __ __ ]	
•Include detoxification, halfway houses, in/outpatient counseling and AA (if 3+ meetings within one month period).				
D21a	How many of these treatments were detox only?		# NUMBER OF DETOX[ __ __ ]	

<i>• If D19a = 00, then question D21a = NN</i>					
<i>• Note: Code the number of treatments listed in D19a that consisted only of Detoxification and no other treatment.</i>					
<b>D23</b>	<b>How much would you say you spent during the past 30 days on alcohol?</b>	<b>TZS.</b> _____			
<i>• Only count actual <b>money</b> spent. What is the financial burden caused by alcohol?</i>					
<b>D24</b>	<b>How much would you say you spent during the past 30 days on drugs?</b>	<b>TZS.</b> _____			
<i>• Only count actual <b>money</b> spent. What is the financial burden caused by drugs?</i>					
<b>D25.</b>	<b>How many days in the past 30 have you been treated in an outpatient setting for alcohol or drugs in the past 30 days?</b>	Number of days [ ___ ___ ]			
<i>• Include days attended AA/NA, other support group, outpatient treatment, detox, methadone, etc.</i>					
<b>D26.</b>	<b>How many days in the past 30 have you experienced Alcohol problems?</b>	Number of days[ ___ ___ ]			
<i>• Include: Craving, withdrawal symptoms, disturbing effects of use, or wanting to stop and being unable to.</i>					
<b>For Questions D28+D30, ask the patient to use the Patient Rating scale. The patient is rating the need for additional substance abuse treatment.</b>					
<b>D28.</b>	<b>How troubled or bothered have you been in the past 30 days by these alcohol problems?</b>	[ ___ ]			
<b>D30.</b>	<b>How important to you now is treatment for these alcohol problems?</b>	[ ___ ]			
<b>D27.</b>	<b>How many days in the past 30 have you experienced: Drug problems?</b>	[ ___ ]			
<i>• Include: Craving, withdrawal symptoms, disturbing effects of use, or wanting to stop and being unable to.</i>					
<b>For Questions D29+D31, ask the patient to use the Patient Rating Scale. The patient is rating the need for additional substance abuse treatment</b>					
<b>D29.</b>	<b>How troubled or bothered have you been in the past 30 days by these drug problems?</b>	[ ___ ]			
	<b>How important to you now is treatment for these drug problems?</b>	[ ___ ]			
<b>D31.</b>					
<b>D36.</b>	<b>How many times have you tried to quit using substances without treatment?</b>	[ ___ ]			
<b>C6. FAMILY/SOCIAL STATUS</b>					
<b>F1.</b>	<b>Marital Status:</b>				
<b>1 [ ___ ]</b>	<b>Married</b>	<b>3 [ ___ ]</b>	<b>Widowed</b>	<b>5 [ ___ ]</b>	<b>Divorced</b>

2 [ ]	Remarried	4 [ ]	Separated	6 [ ]	Never Married
<b>F3.</b>	<b>Are you satisfied with this situation?</b>				
0 [ ]	No	1 [ ]	Indifferent	2 [ ]	Yes
• <i>Satisfied = generally liking the situation.</i>					
<b>F4. Usual living arrangements (past 3 years):</b>					
1 [ ]	With partner & children	6 [ ]	With friends		
2 [ ]	With partner alone	7 [ ]	Alone		
3 [ ]	With children alone	8 [ ]	Controlled environment (eg Jail)		
4 [ ]	With parents	9 [ ]	No stable arrangement		
5 [ ]	With family	10 [ ]	Others (specify): _____ _____		
• <i>Choose arrangements most representative of the past 3 years</i>					
<b>F4a.</b>	<b>Living arrangements past 30 days? (Use codes above) [ ___ ___]</b>				
<b>F6.</b>	<b>Are/were you satisfied with these arrangements?</b>				
0 [ ]	No	1 [ ]	Indifferent	2 [ ]	Yes
• <i>Satisfied = generally liking the situation.</i>					
<b>Do you live with anyone who:</b>					
<b>F7</b>	<b>Has a current alcohol problem?</b>	0 [ ]	No		
		1 [ ]	Yes		
<b>F8</b>	<b>Uses non -prescribed drugs?(or uses prescribed drugs)</b>	0 [ ]	No		
		1 [ ]	Yes		
<b>F9</b>	<b>With whom do you spend most of your free time?</b>	1 [ ]	Family		
		2 [ ]	Friends		
		3 [ ]	Alone		
<b>F10.</b>	<b>Are you satisfied with spending your free time this way?</b>				
0 [ ]	No	1 [ ]	Indiferent	2 [ ]	Yes
• <i>A satisfied response must indicate that the person generally likes the situation. Refers to Question F9</i>					
<b>F11a.</b>	<b>How Many of your close friend use drugs or abuse alcohol?</b>			[ ___ ___]	
<input type="checkbox"/> <i>Note: If patient has no close friends, code "N"</i>					
<b>Have you had significant periods in which you have experienced serious problems getting along with?</b>					

S/#	Serious problems with:	Past 30 days		Life time	
F18	Mother	0 [ ]	No	0 [ ]	No
		1 [ ]	Yes	1 [ ]	Yes
F19	Father	0 [ ]	No	0 [ ]	No
		1 [ ]	Yes	1 [ ]	Yes
F20	Brother/sister	0 [ ]	No	0 [ ]	No
		1 [ ]	Yes	1 [ ]	Yes
F21	Partner/wife/husband	0 [ ]	No	0 [ ]	No
		1 [ ]	Yes	1 [ ]	Yes
F22	Children	0 [ ]	No	0 [ ]	No
		1 [ ]	Yes	1 [ ]	Yes
F23	Other significant family (specify): _____ _____	0 [ ]	No	0 [ ]	No
		1 [ ]	Yes	1 [ ]	Yes
F24	Close friends	0 [ ]	No	0 [ ]	No
		1 [ ]	Yes	1 [ ]	Yes
F25	Neighbours	0 [ ]	No	0 [ ]	No
		1 [ ]	Yes	1 [ ]	Yes
F26	Co-workers	0 [ ]	No	0 [ ]	No
		1 [ ]	Yes	1 [ ]	Yes

• "Serious problems" mean those that endangered the relationship.

• A "problem" requires contact, either by telephone or in person. If no contact code "N"

• If no relative (ex: no children) Code N.

#### HAS ANYONE EVER ABUSED YOU?

S/#	Form of abuse:	Past 30 days		Life time	
F28	Physical abuse? (causes you physical harm)	0 [ ]	No	0 [ ]	No
		1 [ ]	Yes	1 [ ]	Yes
F29	Sexual abuse? (forced any sexual advances/acts)	0 [ ]	No	0 [ ]	No
		1 [ ]	Yes	1 [ ]	Yes
F30	How many days in the past 30 have you had serious conflicts: With your family?				[ ___ ]

Ask the patient to use the Patient Rating Scale:

F32	How troubled or bothered have you been in the past 30 days by: Family problems?	[ ___ ]
F34	How important to you now is treatment or counseling for these: Family problems?	[ ___ ]

<p>• Patient is rating his/her need for counseling for family problems, not whether they would be willing to attend. The patient is rating their need for you/your program to provide or refer them to family services, above and beyond any services they may already be getting.</p>			
<b>F31</b>	<b>How many days in the past 30 have you had serious conflicts: With your family?</b>	[   ]	
<p><b>Ask the patient to use the Patient Rating Scale:</b></p>			
<b>F33</b>	<b>How troubled or bothered have you been in the past 30 days by: Social problems</b>	[   ]	
<b>F35</b>	<b>How important to you now is treatment or counseling for these: Social problems?</b>	[   ]	
<p>• Include patient's need to seek treatment for such social problems as loneliness, inability to socialize, and dissatisfaction with friends. Patient rating should refer to dissatisfaction, conflicts, or other serious problems.</p>			
<b>S/#</b>	<b>NUMBER OF CHILDREN</b>	<b>LIVING WITH YOU</b>	<b>OUTSIDE YOUR HOUSE</b>
<b>F39</b>	<b>How many children do you have?</b>	[   ] [   ]	[   ] [   ]
<b>F39a</b>	<b>How many of these are under age 18?</b>	[   ] [   ]	[   ] [   ]
<p><b>C7. PSYCHIATRIC STATUS</b></p>			
<p><b>How many times have you been treated for any psychological or emotional problems:</b></p>			
<b>P1</b>	<b>In a hospital or inpatient setting?</b>	[   ] [   ]	
<b>P2</b>	<b>Outpatient/private patient?</b>	[   ] [   ]	
<p>• Do not include substance abuse, employment, family counseling.</p>			
<b>S/#</b>		<b>Past 30 days</b>	<b>Life time</b>
<b>P8</b>	<b>Experienced trouble controlling violent behavior including episodes of rage, or violence?</b>	0 [   ] No 1 [   ] Yes	0 [   ] No 1 [   ] Yes
<b>P9</b>	<b>Experienced serious thoughts of suicide?</b>  • Patient seriously considered a plan for taking his/her life.	0 [   ] No 1 [   ] Yes	0 [   ] No 1 [   ] Yes
<b>P10</b>	<b>Attempted suicide?</b>  • Include actual suicidal gestures or attempts.	0 [   ] No 1 [   ] Yes	0 [   ] No 1 [   ] Yes
<b>P11</b>	<b>Has a health care provider recommended you take any medications for psychological or emotional problems?</b>	0 [   ] No 1 [   ] Yes	0 [   ] No 1 [   ] Yes

<p>• <i>Recommended for the patient by a physician or other health care provider as appropriate. Record "Yes" if a medication was recommended even if the patient is not taking it.</i></p>			
<b>P12</b>	<b>How many days in the past 30 have you experienced these psychological or emotional problems?</b>	[ ____ ]	
<p>• <i>This refers to problems noted in Questions P4-P10.</i></p>			
<p><b>For Questions P13-P14, ask the patient to use the Patient Rating Scale</b></p>			
<p>• <i>Treatment episode = a series of continuous visits or treatment days, not the number of visits.</i></p>			
<p><b>Have you had a significant period of time (that was not a direct result of alcohol/drug use) in which you have:</b></p>			
<b>S/#</b>		<b>PAST 30 DAYS</b>	<b>LIFE TIME</b>
<b>P4</b>	<b>Experienced serious depression-sadness, hopelessness, loss of interest?</b>	0 [ ] No 1 [ ] Yes	0 [ ] No 1 [ ] Yes
<b>P5</b>	<b>Experienced serious anxiety/tension uptight, unreasonably worried, inability to feel relaxed?</b>	0 [ ] No 1 [ ] Yes	0 [ ] No 1 [ ] Yes
<b>P6</b>	<b>Experienced hallucinations-saw things/ heard voices that others didn't see/hear?</b>	0 [ ] No 1 [ ] Yes	0 [ ] No 1 [ ] Yes
<p><i>Code other psychotic symptoms here also.</i></p>			
<b>P7</b>	<b>Experienced trouble understanding, Concentrating, or remembering?</b>	0 [ ] No 1 [ ] Yes	0 [ ] No 1 [ ] Yes
<p><b>Have you had a significant period of time (regardless of alcohol and drug use) in which you have:</b></p>			
<p><i>Note: Patient can be under the influence of alcohol/drugs for these questions</i></p>			
<b>P13.</b>	<b>How troubled or bothered have you been by these psychological or emotional problems in the past 30 days?</b>	[ ]	
<p>• <i>Patient should be rating the problem days from Question P12.</i></p>			
<b>P14.</b>	<b>How important to you now is treatment for these psychological or emotional problems?</b>	[ ]	

**SF 12 (English version)**

This information will help your doctors keep track of how you feel and how well you are able to do your usual activities. If you are unsure about how to answer a question, please give the best answer you can and make a written comment beside your answer.

1. In general, would you say your health is?

\_\_\_\_\_ Excellent (1)

\_\_\_\_\_ Very Good (2)

\_\_\_\_\_ Good (3)

\_\_\_\_\_ Fair (4)

\_\_\_\_\_ Poor (5)

The following two questions are about activities you might do during a typical day. Does **YOUR HEALTH NOW LIMIT YOU** in these activities? If so, how much?

2. **MODERATE ACTIVITIES**, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf:

\_\_\_\_\_ Yes, Limited A Lot (1)

\_\_\_\_\_ Yes, Limited A Little (2)

\_\_\_\_\_ No, Not Limited At All (3)

3. Climbing **SEVERAL** flights of stairs:

\_\_\_\_\_ Yes, Limited A Lot (1)

\_\_\_\_\_ Yes, Limited A Little (2)

\_\_\_\_\_ No, Not Limited At All (3)

During the **PAST 4 WEEKS** have you had any of the following problems with your work or other regular activities **AS A RESULT OF YOUR PHYSICAL HEALTH?**

4. **ACCOMPLISHED LESS** than you would like:

\_\_\_\_\_ Yes (1)

\_\_\_\_\_ No (2)

5. Were limited in the KIND of work or other activities:

\_\_\_\_\_ Yes (1)

\_\_\_\_\_ No (2)

During the PAST 4 WEEKS, were you limited in the kind of work you do or other regular activities AS A RESULT OF ANY EMOTIONAL PROBLEMS (such as feeling depressed or anxious)?

6. ACCOMPLISHED LESS than you would like:

\_\_\_\_\_ Yes (1)

\_\_\_\_\_ No (2)

7. Didn't do work or other activities as CAREFULLY as usual:

\_\_\_\_\_ Yes (1)

\_\_\_\_\_ No (2)

8. During the PAST 4 WEEKS, how much did PAIN interfere with your normal work (including both work outside the home and housework)?

\_\_\_\_\_ Not At All (1)

\_\_\_\_\_ A Little Bit (2)

\_\_\_\_\_ Moderately (3)

\_\_\_\_\_ Quite A Bit (4)

\_\_\_\_\_ Extremely (5)

The next three questions are about how you feel and how things have been DURING THE PAST 4 WEEKS. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the PAST 4 WEEKS –

9. Have you felt calm and peaceful?

\_\_\_\_\_ All of the Time (1)

\_\_\_\_\_ Most of the Time (2)

\_\_\_\_\_ A Good Bit of the Time (3)

\_\_\_\_\_ Some of the Time (4)

\_\_\_\_\_ A Little of the Time (5)

\_\_\_\_\_ None of the Time (6)

10. Did you have a lot of energy?

- All of the Time (1)
- Most of the Time (2)
- A Good Bit of the Time (3)
- Some of the Time (4)
- A Little of the Time (5)
- None of the Time (6)

11. Have you felt downhearted and blue?

- All of the Time (1)
- Most of the Time (2)
- A Good Bit of the Time (3)
- Some of the Time (4)
- A Little of the Time (5)
- None of the Time (6)

12. During the PAST 4 WEEKS, how much of the time has your PHYSICAL HEALTH OR EMOTIONAL PROBLEMS interfered with your social activities (like visiting with friends, relatives, etc.)?

- All of the Time (1)
- Most of the Time (2)
- A Good Bit of the Time (3)
- Some of the Time (4)
- A Little of the Time (5)
- None of the Time (6)

**User Guide: FGD or IDI (English version)**

## 1. Perceived quality of life:

1. Clients understanding of quality of life (Probe: what does he/she regard as good or poor quality of life? how so?)
2. How does one measure those reported dimensions for quality of life (Probe: how does one measure good/poor QOL)
3. What are some of things can completely alter or make a shift from one state to the other (ie from good to poor QOL or vice versa).

**Appendix IV: Adiction Severity Index (Swahili –TAPP modified version)****AJIRA/HALI YA KUJIKIMU**

<b>KIWANG O</b>	<b>MIAKA</b>	
0. [ ]	Hakuna elimu	
1. [ ]	Msingi miaka 1-7	
2. [ ]	Sekondari ya chini ya miaka 9-12	
3. [ ]	Sekondari ya juu miaka 13-14	
4. [ ]	Baada ya miaka 12, hakuna elimu ya juu	
4a[ ]	Baada ya miaka 12, alienda kozi ya kitaaluma	
5. [ ]	Hatua ya kwanza ya elimu ya juu (Advance Diploma, Bachelor)	
6. [ ]	Hatua ya pili ya elimu ya juu (Masters au PhD).	
<i>• Include formal education only.</i>		
<b>E1a.</b>	<b>Shahada ya juu iliyopatikana,</b>	<b>Taja</b> _____ _____
<b>E2*</b>	<b>Mafunzo au elimu ya ufundi uliyomaliza:</b>	<b>Miezi</b> _____ _____

<i>• Formal/organized training only.</i>			
<b>E4a</b>	<b>Je, chaguo lako la Ajira limekwazwa na ukosefu wa usafiri?</b>	0 [ ]	Hapana
		1 [ ]	Ndio
<b>E6.</b>	<b>Katika kazi ulizofanya za ajira ya muda wote , uliyoifanya kwa muda mrefu kuliko zote ilidumu kwa muda gani?</b>	<b>MIAKA:</b> [____]	<b>MIEZI:</b> [ ____]
<i>• Full time = 35+ hours weekly; does not necessarily mean most recent job.</i>			
<b>E7.</b>	<input type="checkbox"/> <b>Ajira ya kawaida (au ya mwisho)?</b>	<b>Taja</b> _____	
<i>(Use International Classification references page 1)</i>			
<b>E9</b>	<b>Je, kuna mtu anachangia kwa kiasi kikubwa kujikimu kwako?</b>	0 [ ]	Hapana
		1 [ ]	Ndio
<i>Is patient primarily financially supported on a regular basis from family/friends; include spouse's contribution; exclude support by an institution. "Housing" is considered the majority of someone's support.</i>			
<b>E10.</b>	<b>Ni nini katika hivi vinawakilisha unavyotumia muda mwingi katika miaka 3 iliyopita?</b>		
1. [ ]	Kazi ya muda wote (saa 35+)	6. [ ]	Mstaafu/Mlemavu
2.[ ]	Sehemu ya muda (masaa ya kawaida)	7.[ ]	Sio-ajiriwa
3.[ ]	Sehemu ya muda (masaa si wa kawaida)	8. [ ]	Gerezani au jela
4.[ ]	Mwanafunzi	9. [ ]	Mama au baba wa nyumbani
5.[ ]	Mwanajeshi		
<i>• Answer should represent the majority of the last 3 years, not just the most recent selection. If there are equal times, select category which best represents the current situation.</i>			
<b>E11.</b>	<b>Je, ni siku ngapi katika siku 30 zilizopita ulipata pesa kihalali?</b>	[ ____ ____]	
<b>E12.</b>	<b>Ajira?</b>	TZS. _____	
<i>• Net or "take home" pay, include any money earned except illegal income</i>			

<b>E16</b>	<b>Mwenza, familia, au marafiki?</b>	<b>TZS.</b> _____
<p>• <i>Money for personal expenses. Also code unreliable sources of income, windfalls (unexpected money) money from loans, inheritance. (Record <b>cash</b> payments only, etc.).</i></p>		
<b>E17</b>	<b>Njia za haramu?</b>	<b>TZS.</b> _____
<p>• <i>Cash obtained from drug dealing, stealing, selling stolen goods, prostitution, etc. <b>Do not count</b> estimated cash value of drugs or other items obtained illegally</i></p>		
<b>E18</b>	<b>Ni watu wangapi wanakutegemea kwa kiasi kikubwa kwa chakula chao, malazi. n.k.?</b>	Idadi ya watu [ ___ ___ ]
<p>• <i>Must be regularly depending on patient, do include alimony/child support, do not include the patient or self-supporting spouse, etc.</i></p>		
<b>E19</b>	<b>Ni siku ngapi umepata matatizo ya kazi katika siku 30 zilizopita?</b>	Idadi ya siku [ ___ ___ ]
<p>• <i>Include inability to find work, if they are actively looking for work, or problems with present job in which that job is jeopardized. • If the patient has been incarcerated or detained all of the past 30 days, code "NN"</i></p>		

**Kwa maswali E12, E16 and E17: Ni kiasi gani cha pesa ulizopata kutoka kwa vyanzo vifuatavyo katika siku 30 zilizopita?**

## C2. MEDICAL STATUS

<b>M1</b>	<b>Ni mara ngapi katika maisha yako ulilazwa hospitali kwa matatizo ya kimwili?</b>	[ ___ ___ ]
<p>• <i>Include overdoses and delirium tremens. Exclude detox, alcohol/drug, psychiatric treatment and childbirth (if no complications). Enter the number of <u>overnight</u> hospitalizations for medical problems.</i></p>		
<b>M3</b>	<b>Je, una maradhi/magonjwa yoyote sugu ambayo yanaingiliana na maisha yako?</b>	0 [ ] Hapana
		1 [ ] Ndio
<p>• <i>Kama "Ndio", taja kwa maoni.</i></p> <p>• <i>A chronic medical condition is a serious physical condition that requires regular care, (i.e., medication, dietary restriction) preventing full advantage of their abilities.</i></p>		

<b>M4.</b>	<b>Je, kuna mhudumu wa afya alipendekeza utumie dawa zozote kwa matumizi ya mara kwa mara kwa matatizo yako ya kimwili?</b>	0 [ ]	Hapana
		1 [ ]	Ndio
<p><i>• Do not include various remedies given by a non-healthcare Provider. Must be for a medical condition; don't include psychiatric medicines. Include medicines prescribed whether or not the patient is currently taking them. <u>The intent is to verify chronic medical problems.</u></i></p>			
<b>M6.</b>	<b>Ni siku ngapi umepata matatizo ya magonjwa ya kimwili kwa kipindi cha siku 30 zilizopita?</b>	[ ___ ]	
<b>M7.</b>	<b>Ni kwa kiasi gani umesumbuliwa au kukerwa na matatizo ya kimwili kwa siku 30 zilizopita?</b>	[ ___ ]	
<p><i>• Restrict response to problem days of Question M6.</i></p>			
<b>M8.</b>	<b>Ni muhimu kiasi gani kwako kwa sasa kupata tiba ya matatizo haya?</b>	[ ___ ]	
<p><i>• If client is currently receiving medical treatment, refer to the need for <b>additional</b> medical treatment by the patient. Note: The patient is rating their need for additional medical services or referrals from your agency, above any services they may already be getting.</i></p>			
<b>M12</b>	<b>Je, umeshawahi kupima kubaini kama una maambukizi ya homa ya majano/homa ya ini?</b>	0 [ ]	Hapana
		1 [ ]	Ndio
<b>M12b</b>	<b>Kama ndio, majibu yalikuwa nini kwa kipimo cha homa ya majano/homa ya ini?</b>	“N” [ ]	Sikupima
		1 [ ]	Hasi (sijaambukizwa)
		2 [ ]	Chanya (nimeambukizwa)
		3 [ ]	Sijui
<b>M12c</b>	<b>Utapenda msaada kupata kipimo cha homa ya njano/homa ya ini?</b>	0 [ ]	Hapana
		1 [ ]	Ndio
		2 [ ]	Sina hakika
<b>M13</b>	<b>Je, umekwisha wahi kupima kubaini kama una maambukizi ya VVU?</b>	0 [ ]	Hapana
		1 [ ]	Ndio

M13b	Kama ndio majibu yalikuwa nini kwa kipimo cha VVU?	“N” [ ]	Sikupima
		1 [ ]	Hasi (sijaambikizwa)
		2 [ ]	Chanya (nimeambukizwa)
		3 [ ]	Sijui
M13c	Utapenda msaada kupata kipimo cha VVU?	0 [ ]	Hapana
		1 [ ]	Ndio
		2 [ ]	Sina hakika
M14.	Je, kwa sasa wewe ni mjamzito?	“N”[ ]	Mwanaume
		0 [ ]	Hapana
		1 [ ]	Ndio
		2 [ ]	Sina Hakika
M14a	Kama mjamzito, je unapata huduma ya kliniki ya kabla ya uzazi?	“N”[ ]	Mwanaume
		0 [ ]	Hapana
		1 [ ]	Ndio
M14b	Kama huna hakika, utapenda kupata msaada wa kipimo cha ujauzito?	“N”[ ]	Mwanaume
		0 [ ]	Hapana
		1 [ ]	Ndio

#### C4. POMBE/DAWA

*Angalizo: Njia za Utumiaji (ROA) Aina:*

1	<i>Mdomoni (chochote kinachomezwa)</i>
2	<i>Puani (or any other sub- cutaneous membrane administration)</i>
3	<i>Kuvuta</i>

4	<i>Non-IV injection (such as IM or “skin popping”</i>			
5	<i>Kujidunga kwenye mshipa (kudunga moja kwa moja kwenye mshipa).</i>			
<p><i>• In cases where two or more routes are used, the most serious route should be coded. The routes listed are from least severe to most severe.</i></p>				
<i>S/#</i>	<i>DAWA INAYOTUMIKA</i>	<i>SIKU 30 ZILIZOPI TA</i>	<i>MAISHA NI (MIAKA)</i>	<i>NJIA YA UTUMIAJI (ROA)</i>
<b>D1</b>	<b>Pombe (kwa matumizi yoyote katika siku 30 zilizopita)</b>			
<b>D2</b>	<b>Pombe – kiwango cha kulewa sana hadi kupata madhara</b>			
<b>D3</b>	<b>Heroini/Unga</b>			
<b>D4</b>	<b>Methadone</b>			
<b>D5</b>	<b>Other opioids/dawa za maumivu</b>			
<b>D6</b>	<b>Barbiturates</b>			
<b>D7</b>	<b>Dawa za usingizi kama Valium</b>			
<b>D8</b>	<b>Kokeni</b>			
<b>D9</b>	<b>Amphetamines/stimulants</b>			
<b>D10</b>	<b>Bangi</b>			
<b>D 11</b>	<b>Hallucinogens</b>			
<b>D12</b>	<b>Viyeyusho (<i>thinner, petroli, gundi nk</i>)</b>			
<b>D13</b>	<b>Zaidi ya dawa moja (pamoja na pombe)</b>			
<b>D14a.</b>	<b>Tambua dawa kuu inayotumika</b>			[ ____ ]
<b>D14b.</b>	<b>Tambua dawa ya pili kuu inayotumika</b>			[ ____ ]
<p><i>• Interviewer should determine the primary and secondary drugs of abuse.</i></p>				
<b>D15.</b>	<b>Je, ni kwa muda mrefu kiasi gani ambapo kwa hivi karibuni ulijizuia kwa hiari kutumia dawa hizi kuu.</b>	<b>MIEZI</b> [ ____ ]		

<p>• <i>Most recent sobriety lasting at least one month. Periods of hospitalization/incarceration do <u>not</u> count. Periods of antabuse, methadone, or naltrexone use do count. • Code 00 = never abstinent.</i></p>		
<b>D16</b>	<b>Ni miezi mingapi imepita toka kikomo cha kujizuia kutumia dawa hizi kuu?</b>	<b>MIEZI</b> [ ____ ____]
<p>• <i>If D15 = 00= still abstinent, then D16 = NN.</i></p>		
<b>D17</b>	<b>Ni kwa muda gani umekuwa na ‘Delirium Tremens’ (DT's) ya pombe:</b>	<b># MARA DT</b> [ ____ ____]
<p>1) <i>DTs occur 24-48 hours after last drink or significant decrease in alcohol intake, shaking, severe disorientation, fever, hallucinations, they usually require medical attention</i></p>		
<b>D19a</b>	<b>Ni kwa muda gani katika maisha yako umetibiwa kwa matumizi ya pombe au ya dawa za kulevya?</b>	<b>#MUDA ALIOTIBIWA</b> [ ____ ____]
<p>• <i>Include detoxification, halfway houses, in/outpatient counseling and AA (if 3+ meetings within one month period).</i></p>		
<b>D21a</b>	<b>Ni tiba ngapi katika hizi zilikuwa ni “detox” tu?</b>	<b># TIBA YA DETOX</b> [ ____ ]
<p>• <i>If D19a = 00, then question D21a = NN</i></p> <p>• <i>Note: Code the number of treatments listed in D19a that consisted only of Detoxification and no other treatment.</i></p>		
<b>D23</b>	<b>Ni kiasi gani cha pesa umetumia kwa pombe katika kipindi cha siku 30 zilizopita?</b>	<b>TZS.</b> _____
<p>• <i>Only count actual <b>money</b> spent. What is the financial burden caused by alcohol?</i></p>		
<b>D24</b>	<b>Ni kiasi gani cha pesa umetumia kwa dawa za kulevya katika kipindi cha siku 30 zilizopita?</b>	<b>TZS.</b> _____
<p>• <i>Only count actual <b>money</b> spent. What is the financial burden caused by drugs?</i></p>		
<b>D25</b>	<b>Ni siku ngapi katika siku 30 zilizopita umetibiwa kama mgonjwa wa nje kwa ajili ya matumizi ya pombe au dawa za kulevya?</b>	idadi ya siku [ ____ ]
<p>• <i>Include days attended AA/NA, other support group, outpatient treatment, detox, methadone, etc.</i></p>		
<b>D26.</b>	<b>Ni siku ngapi katika siku 30 zilizopita umeshuhudia matatizo kutokana na matumizi yako ya pombe?</b>	Idadi ya siku [ ____ ____]

• *Include: Craving, withdrawal symptoms, disturbing effects of use, or wanting to stop and being unable to.*

**For Questions D28+D30, ask the patient to use the Patient Rating scale. The patient is rating the need for additional substance abuse treatment.**

D28.	Je, umesumbuka au kukerwa kwa kiasi gani na matatizo ya matumizi ya pombe katika kipindi cha siku 30 zilizopita?	[ ___ ]
D30.	Ni muhimu kiasi gani kwako sasa kutibiwa haya matatizo ya matumizi ya pombe?	[ ___ ]
D27.	Ni siku ngapi katika siku 30 zilizopita umeshuhudia matatizo ya matumizi ya dawa za kulevya?	[ ___ ]

• *Include: Craving, withdrawal symptoms, disturbing effects of use, or wanting to stop and being unable to.*

**For Questions D29+D31, ask the patient to use the Patient Rating Scale. The patient is rating the need for additional substance abuse treatment**

D29.	Je, ni kiasi gani katika siku 30 zilizopita umesumbuka au kukerwa kwa matatizo ya dawa za kulevya?	[ ___ ]
D31.	Ni muhimu kiasi gani kwako sasa kupata tiba kwa matatizo ya dawa za kulevya?	[ ___ ]
D36.	Je, ni mara ngapi umejaribu kuacha matumizi ya dawa za kulevya au pombe bila kutumia tiba?	Idadi [ ___ ___ ]

## C6. FAMILIA/HALI YA KIJAMII

F1.	<b>Hali ya ndoa (tafadhali weka tiki jibu sahihi):</b>				
1 [ ]	Umeoa/olewa	3 [ ]	Mjane/mgane	5 [ ]	Achika
2 [ ]	Umeoa/olewa tena	4 [ ]	Tengana	6 [ ]	Hajawahi kuoa/olewa
F3.	<b>Je, unaridhika na hali hii? (tafadhali weka tiki jibu sahihi):</b>				
0 [ ]	Hapana	1 [ ]	Hamna tofauti	2 [ ]	Ndio

• *Satisfied = generally liking the situation.*

<b>F4. Mpangilio wa kawaida wa kuishi (miaka 3 iliyopita) (tafadhali weka tiki jibu sahihi):</b>				
1[ ]	Na mwenzi na watoto	6 [ ]	Na marafiki	
2[ ]	Na mwenzi tu	7 [ ]	Pekee	
3[ ]	Na watoto pekee	8 [ ]	Jela	
4[ ]	Na wazazi	9 [ ]	Hakuna mpangilio thabiti	
5[ ]	Ndugu wengine kama shangazi n.k	10[ ]	Nyingine (taja): _____	
<i>• Choose arrangements most representative of the past 3 years</i>				
<b>F4a.</b>	<b>Mpangilio wa kuishi katika siku 30 zilizopita? (tumia alama za hapo juu) [__ __]</b>			
<b>F6.</b>	<b>Je, unaridhika na mpangilio huu? (tafadhali weka tiki jibu sahihi):</b>			
0 [ ]	Hapana	1 [ ]	Hamna tofauti	2 [ ] Ndio
<i>• Satisfied = generally liking the situation.</i>				
<b>Je, unaishi na mtu yeyote ambaye:</b>				
<b>F7</b>	<b>Ana matatizo ya karibuni ya unywaji wa pombe</b>	0 [ ]	Hapana	
		1 [ ]	Ndio	
<b>F8</b>	<b>Anatumia dawa zisizoshauriwa na daktari (au anazihujumu dawa alizoshauriwa)</b>	0 [ ]	Hapana	
		1 [ ]	Ndio	
<b>F9</b>	<b>Je, unatumia na nani muda wako wa mapumziko?</b>	1 [ ]	Familia	
		2 [ ]	Marafiki	
		3 [ ]	Peke yangu	
<b>F10.</b>	<b>Je, unaridhika kutumia muda wako huru kwa njia hii? (tafadhali weka tiki jibu sahihi):</b>			
0 [ ]	Hapana	1 [ ]	Hamna tofauti	2 [ ] Ndio
<i>• A satisfied response must indicate that the person generally likes the situation. Refers to Question F9</i>				
<b>F11a.</b>	<b>Ni marafiki zako wangapi wanatumia dawa za kulevya au kutumia vibaya pombe?</b>	[ ____ ]		

**Je, kuna muda mrefu ambao umekuwa na matatizo ya kuelewana na watu wengine?**

<b>S/#</b>	<b>Matatizo makubwa kimahusiano na:</b>	<b>Siku 30 zilizopita</b>	<b>Maishani mwako</b>
<b>F18</b>	<b>Mama</b>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>F19</b>	<b>Baba</b>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>F20</b>	<b>Kaka/Dada</b>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>F21</b>	<b>Mwenzi/Mke/Mume</b>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>F22</b>	<b>Watoto</b>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>F23</b>	<b>Wengine muhimu katika familia</b> (taja): _____	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>F24</b>	<b>Marafiki wa karibu</b>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>F25</b>	<b>Majirani</b>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>F26</b>	<b>Wafanyakazi wenzio</b>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio

• "Serious problems" mean those that endangered the relationship.

• A "problem" requires contact, either by telephone or in person. If no contact code "N"

• If no relative (ex: no children) Code N.

**Je, kuna mtu amekwisha kukuonea?** (*Weka tiki jibu sahihi*)

S/#	Aina ya uonevu	Siku 30 zilizopita	Maishani mwako
F28	<b>Kimwili?</b> ( <i>ilisababisha madhara ya mwili</i> )	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
F29	<b>Kingono?</b> ( <i>Lazimisha aina yoyote ya kurubuni/matendo ya ngono</i> )	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
F30	<b>Ni siku ngapi katika siku 30 zilizopita umekuwa na ugomvi mzito na wanafamilia wenzako?</b>		[ ___ ___]

**Ask the patient to use the Patient Rating Scale:**

F32	<b>Umesumbuliwa au kukerwa kwa kiasi gani na matatizo ya kifamilia kwa kipindi cha siku 30 zilizopita?</b>	[ ]
F34	<b>Ni muhimu kwako kupata tiba au unasihi kwa matatizo haya ya kifamilia kwa sasa?</b>	[ ]

*• Patient is rating his/her need for counseling for family problems, not whether they would be willing to attend. The patient is rating their need for you/your program to provide or refer them to family services, above and beyond any services they may already be getting.*

F31	<b>Ni siku ngapi katika siku 30 zilizopita umekuwa na ugomvi mzito na watu wengine (ukitoea familia yako)?</b>	[ ___ ___]
-----	--	------------

**Ask the patient to use the Patient Rating Scale:**

F33	<b>Umesumbuliwa au kukerwa kwa kiasi gani na matatizo ya kijamii kwa kipindi cha siku 30 zilizopita?</b>	[ ]	
F35	<b>Ni muhimu kwako kiasi gani kupata tiba au unasihi kwa matatizo haya ya kijamii kwa sasa?</b>	[ ]	
S/#	<b>IDADI YA WATOTO</b>	<b>WANA OISHI NAWA</b>	<b>WANA OISHI NJE YA NYUMBANI</b>
F39	<b>Je, una watoto wangapi?</b>	[ ___ ___]	[ ___ ___]
F39a	<b>Je, wangapi kati ya watoto wako wana miaka chini ya 18?</b>	[ ___ ___]	[ ___ ___]

**C7. HALI YA AKILI**

<b>Ni mara ngapi umetibiwa kwa aina yoyote ya matatizo ya akili au msongo wa mawazo:</b>		
<b>P1</b>	<b>Hospitalini au mpango wa mgonjwa aliyelazwa</b>	[ ___ ___]
<b>P2</b>	<b>Mgonjwa wa nje/mgonjwa wa kulipia?</b>	[ ___ ___]
<ul style="list-style-type: none"> <li>• <i>Do not include substance abuse, employment, family counseling.</i></li> <li>• <i>Treatment episode = a series of continuous visits or treatment days, not the number of visits.</i></li> </ul>		

**Je, ulishakuwa na muda maalumu (ambao haukuwa na matokeo ya moja kwa moja ya pombe/matumizi ya dawa) ambao ulikuwa:**

<b>S/#</b>	<b>DALILI YA MAGONJWA YA AKILI</b>	<b>SIKU</b> 30 <b>ZILIZOPITA</b>	<b>MAISHANI</b>
<b>P4</b>	<b>Hisia kubwa ya msongo-huzuni, iliyokosa matumaini, upotevu wa shauku</b>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>P5</b>	<b>Hisia kubwa ya wasiwasi/fadhaa, wasiwasi usiokuwa na sababu, kutokuwa na uwezo wa kujihisi utulivu?</b>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>P6</b>	<b>Hisia kubwa ya njozi-kuona vitu/kusikia sauti ambazo wengine hawaoni/kusikia?</b> <i>Code other psychotic symptoms here also.</i>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>P7</b>	<b>Hisia kubwa ya matatizo ya kuelewa, kuwa makini au kukumbuka?</b>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio

**Je, ulishakuwa na muda maalumu (ambao haukuwa na matokeo ya moja kwa moja ya pombe/matumizi ya dawa) ambao ulikuwa:**

*Note: Patient can be under the influence of alcohol/drugs for these questions*

<b>S/#</b>	<b>DALILI YA MAGONJWA YA AKILI</b>	<b>SIKU 30 ZILIZOPITA</b>	<b>MAISHANI</b>
<b>P8</b>	<b>Ulipata matatizo ya kuzuia tabia za kinguvu pamoja na tukio la ghadhabu, au vurugu?</b>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>P9</b>	<b>Ulipata mawazo ya kutaka kujiua?</b> <i>• Patient seriously considered a plan for taking his/her life.</i>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>P10</b>	<b>Ulijaribu kujiua?</b> <i>• Include actual suicidal gestures or attempts.</i>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>P11</b>	<b>Je, mtoa huduma ya afya alipendekeza kwako tiba yoyote ya akili au matatizo ya msongo wa mawazo?</b> <i>• Recommended for the patient by a physician or other health care provider as appropriate. Record "Yes" if a medication was recommended even if the patient is not taking it.</i>	0 [ ] Hapana 1 [ ] Ndio	0 [ ] Hapana 1 [ ] Ndio
<b>P12</b>	<b>Ni siku ngapi katika siku 30 zilizopita ulishuhudia matatizo haya ya akili au msongo wa mawazo?</b>		[ ___ ___ ]
<i>• This refers to problems noted in Questions P4-P10.</i>			
<b>For Questions P13-P14, ask the patient to use the Patient Rating Scale</b>			
<b>P13.</b>	<b>Umesumbuliwa au kukerwa kwa kiasi gani kwa kipindi cha siku 30 zilizopita kwa matatizo ya kiakili na msongo wa mawazo?</b>		[ ]
<i>• Patient should be rating the problem days from Question P12.</i>			
<b>P14.</b>	<b>Ni muhimu kiasi kwako kwa sasa kupata tiba au unasihi kwa matatizo haya ya kiakili na msongo wa mawazo?</b>		[ ]
<i>Note: The patient is rating their need for you/your program to provide or refer them to psychological/psychiatric services, above and beyond treatment they may already be getting somewhere else.</i>			

**E. SF-12 (Swahili version)**

Habari hii itamuwezesha mtoa huduma ya afya kuweka rekodi ya jinsi unavyojihisi na ni kwa vizuri kiasi gani unaweza kufanya shughuli za kawaida. Jibu kila swali kwa kuweka alama juu ya mstari mbele ya swali husika. Endapo huna hakika kuhusu kujibu la swali, tafadhali toa jibu bora utakavyoweza na weka maoni kwa maandishi pembezoni mwa jibu

1. Kwa **KAWAIDA**, unaweza kusema afya yako ni:

- a. Nzuri mno (1)
- b. Nzuri sana (2)
- c. Nzuri (3)
- d. Inaridhisha (4)
- e. Dhaifu (5)

Maswali mawili yanayofuata ni kuhusu shughuli unazoweza kufanya katika siku za kawaida. Je, **AFYA YAKO SASA INAKUZUIA** katika shughuli hizi? kama ndio, kwa kiasi gani?

2. **KAZI ZA KIASI**, kama vile kuhamisha meza, kusukuma kizoa vumbi, kuviringisha tufe, au kucheza mpira wa miguu

- a. Ndio, ukomo sana (1)
- b. Ndio, ukomo kidogo (2)
- c. Hapana, hakuna ukomo kabisa (3)

3. Kupanda ngazi **KADHAA**:

- a. Ndio, ukomo sana (1)
- b. Ndio, ukomo kidogo (2)
- c. Hapana, hakuna ukomo kabisa (3)

Katika kipindi cha **WIKI 4 ZILIZOPITA** je, umekuwa na matatizo yafuatayo na kazi yako au shughuli za kawaida **KUTOKANA NA SABABU YA AFYA YAKO YA MWILI?**

4. **UMETIMIZA KIDOGO** kuliko ambavyo ungependa:

- a. Ndio (1)
- b. Hapana (2)

5. Je, kulikuwa na ukomo kwako wa **AINA** ya kazi au shughuli nyingine:

- a. Ndio (1)
- b. Hapana (2)

Katika kipindi cha **WIKI 4 ZILIZOPITA**, ulishindwa kufanya aina yoyote ya kazi au shughuli nyingine za kawaida **KUTOKANA NA SABABU YA MATATIAZO YA MSONGO** (kama vile kuhisi msongo au wasiwasi)?

6. **UMETIMIZA KIDOGO** kuliko ambavyo ungependa:

- a. Ndio (1)
- b. Hapana (2)

7. Hukufanya kazi au shughuli nyingine kwa **UANGALIFU** kama kawaida:

- a. Ndio (1)
- b. Hapana (2)

8. Katika kipindi cha **WIKI 4 ZILIZOPITA**, ni kwa kiasi gani **MAUMIVU** yaliingiliana na kazi zako za kawaida (pamoja na kazi zote za nje na nyumbani)?

- a. Sio kabisa (1)
- b. Kidogo tu (2)
- c. Wastani (3)
- d. Kiasi kidogo (4)
- e. Mno (5)

Maswali matatu yafuatayo ni kuhusu unajihisi vipi na mambo yalikuwaje **KATIKA WIKI 4 ZILIZOPITA**. Kwa kila swali tafadhali toa jibu moja ambalo linakuja karibu na jinsi ulivyojihisi. Ni kwa kiasi gani cha muda katika **WIKI 4 ZILIZOPITA**

9. Je, ulijihisi utulivu na amani?

- a. Wakati wote (1)
- b. Wakati mwingi (2)
- c. Kiasi kizuri kidogo cha muda (3)
- d. Wakati mwingine (4)
- e. Wakati mdogo kiasi (5)

f. Hakuti wakati (6)

10. Je, ulikuwa na nguvu nyingi?

a. Wakati wote (1)

b. Wakati mwingi (2)

c. Kiasi kizuri kidogo cha muda (3)

d. Wakati mwingine (4)

e. Wakati mdogo kiasi (5)

f. Hakuti wakati (6)

11. Je, ulihisi kuvunjika moyo au huzuni?

a. Wakati wote (1)

b. Wakati mwingi (2)

c. Kiasi kizuri kidogo cha muda (3)

d. Wakati mwingine (4)

e. Wakati mdogo kiasi (5)

f. Hakuti wakati (6)

12. Katika **MIEZI 4 ILIYOPITA**, ni kwa kiasi gani cha muda **HALI YA MATATIZO YAKO YA AFYA AU MSONGO** iliingilia shughuli zako za kijamii (kama kutembelea marafiki, ndugu n.k.)?

a. Wakati wote (1)

b. Wakati mwingi (2)

c. Kiasi kizuri kidogo cha muda (3)

d. Wakati mwingine (4)

e. Wakati mdogo kiasi (5)

f. Hakuti wakati (6)

**User Guide: IDI & FGD (Kiswahili version)***Mtazamo juu ya thamani ya ubora wa maisha*

1. Jinsi mjidunga anavyoelewa ubora wa maisha. ( Dadisi; Ni vitu gani anavyotumia kutambua kuwa hali ya maisha kuwa bora au duni)
  2. Mtu anawezaje kupima kiwango hicho cha ubora wa maisha kwa kutumia vigezo hivi vilivyoainishwa hapo juu? (Dadisi: Ni jinsi gani mtu anaweza kupima vigezo hivyo?)
  3. Ni vitu gani vinavyoweza kubadiri hali ya maisha kutoka kuwa bora na kuwa duni au kinyume chake.
-