Throughout the world, the prison population is increasing. It was reported that more than 10 million people are in prisons as in 2018, and United States hold the largest prison populations [1]. In 2019, prisons in Malaysia held 74 000 prisoners or 230 per 100, 000 populations, a steady increment from previous years [2]. The relationship between prison and mental health service is inextricably mutual [3], however, it was not always in favour to mentally disordered offenders due to many factors, one of them is criminalization of people with mental disorder [4]. Many of the prisoners have contact to mental health services prior to the imprisonment [5, 6, 7], even though the care appeared to be inadequate [8, 9]. Many of the prisoners who have mental disorder also has been incarcerated more than once and committed violence offence [10].

The prison itself is inherently a stressful environment. A study in England noted that psychiatric symptoms were highest during the first week of custody among prisoners with psychosis and major depressive disorder. However, the symptoms tend to decline over time for major depressive disorder and no mental disorder [11]. A systematic review found that mental state is worse upon entry to prison but it does improve with time. Factors that affected mental health in a negative way are isolation and overcrowding. Isolation itself hinder mental health to improve. Unhealthy prison environment will affect the prisoners and the prison officers alike [12].

Globally, it is known that the prevalence of mental disorder is high in prison populations [13, 14, 15, 16, 17]. A more recent systematic review showed that highest prevalence of mental disorder in the prison were drug misuse (10-48%) for men and (30-60%) for women, followed by alcohol misuse (18-30%) for men and (10-24%) for women; major depression (10%) for men and (14%) for women and psychotic disorder (4%) for both men and women. The prevalence of personality disorders ranges from 7-65% [18]. A systematic review and meta-analysis focusing on low income and middle income countries also yielded similar findings [19]. The presence of substance use disorder significantly increased the rate of all-cause mortality [20].

There are few data from Malaysia that looked into the prevalence of mental disorder in prison populations. These studies mostly looked into specific group of prisoners in one individual prison with smaller sample size. One study which focused on 80 convicted female offenders, found the lifetime prevalence of any type mental disorder was 33.8% but higher for six-month prevalence (62.5%). Half of them have lifetime substance use disorder and almost half have antisocial personality disorder [21]. Another study which focused
on young male adult prisoners [22] showed that prevalence of any mental disorders was 60%. The prevalence of substance related disorder including alcohol was the highest (50.2%), followed by major depressive disorder and dysthymia (16.9%). Another one third has antisocial personality disorder. A study among remand prisoners on the other hand, found that prevalence of mental disorder was 75.4% if substance related disorder was included. The prevalence reduced to 33.6% when substance related disorders were excluded. The most common disorder was substance related disorder (65.4%), followed by anxiety disorder (25.6%) and mood disorders (12.5%) [23].

Suicide and self-harm are a concern in prison [24]. Many studies looked at the prevalence and the factors contribute to suicidal behaviour in prison. For example, [25] in an Australian study among 1166 prisoners found out that the lifetime prevalence of suicide ideation was 33.7% and suicide attempt was 20.5%. More than half who reported suicidal ideation has previous attempt. Another study looked at suicide in 12 countries found the rates of suicide among male prisoners, in the majority of these countries were 100 per 100 000. These were 3 times higher than the general population [26] similar to another study in 24 high-income countries that showed suicide rate is higher than 3 in men and 9 in women compared to general population [27].

The presence of mental disorder was also associated with near-lethal suicide attempts among male [28] and female prisoners [29]. Suicide were high among remand prisoners, occurred within 7 days of imprisonment, majority had mental disorder, substance use disorder being the highest (27%) and slightly more than half presented with symptoms suggestive of mental disorder on reception [30]. Identifiable risk factors were previous history of suicidal behaviour, mental disorder, psychotropic medications, violent offence and solitary confinement [31]. Suicide is not only higher in prison but also after the prisoners released to community when compared to the general population which occurred especially within 28 days post-release [32].

Nevertheless, there are unmet needs among prisoners while in prison including wish to receive care for mental health problems [33] and addiction problems [34]. They require some level of mental health service [35]. If the mental disorder left unaddressed and untreated, the prisoners will have higher risk for suicide, self-harm, violence and victimization [18]. Inadequate training among prison staffs in recognizing and identifying what constitute symptoms of mental health problems or differentiating between mental disorder’s symptoms and behaviour would place prisoners with mental health disorder in jeopardy as it will delay in receiving appropriate treatment. As a consequence, the mentally ill prisoners were more likely to be placed in solitary confinement [36]. One study for example, have showed higher incidence of mental disorders among prisoners placed in solitary confinement (28%) compared when non-solitary confinement prisoners (15%) [37]. Two most common disorders were adjustment disorders and depressive disorders.

A good mental health service in prison will benefit the prisoners, prison employees and eventually the community [38]. World Health Organization (WHO) recommended steps to be taken to improve the services which include diversion towards mental health system; access to mental health care for prisoners in the prison and acute beds in psychiatric hospitals; availability of
appropriate psychological and pharmacological interventions; prison staff training; psychoeducation among prisoners on mental health; high standard in prison management; include prisoners in national mental health policies and plans; protection of human rights in mental health legislation and multi-agency collaboration. Essentially, recognizing effective treatments in prison is crucial. Prisoners should have access to mental health services equivalence with mental health services in the community [39].

To begin with, prisons are part of a pathway where offenders went through the criminal justice system. In this way, mental health care should begin even before the offender enter the prison, for example diversion and liaison services [40]. Their function is mainly to divert people from criminal justice system when alternative approach in the community is available. This approach mainly for low level crime when mental disorder is the contributing factor, for example; street triage services [41] and Crisis Intervention Team (CIT) [42].

Treatment and care of prisoners with mental disorder is very important but complex [43]. Nevertheless, not all mentally disordered offenders require specialized mental health care. The level of care depends on the severity of the disorder or complexity of the needs. It was suggested that the mental health services provided for mentally disordered offenders falls under six goals: mental illness recovery, emotions management institutional functioning, re-entry, risk-need, and personal growth [44]. Examples are those with suicidal behaviours [45], substance misuse [46], personality disorders [47] and intellectual disability [40]. Psychotherapy [48] and risk/need assessment [49] should be included. For this purpose, an adequate number of mental health professional and expertise are needed such as clinical psychologist, counsellor, mental health paramedics apart from forensic psychiatrist. Prison staff should also be trained in managing prisoners with mental health problems. Prison mental health service ought to be integrated [50] and involve multi-agencies namely mental health services and criminal justice system [51] for seamless care pathway to reduce recidivism.

The prison mental health services, ultimately should abide to the Nelson Mandela Rules outlined in Rule 25 by the United Nation which says every prison shall have comprehensive service consist of an independent multi-disciplinary team with sufficient expertise managing the prisoners’ physical and mental health [52]. Mental health services needed for prisoners include mental health promotion, screening at reception, in-prison care either acute or continuation, programs to cater for their needs while in prison, and after release care to reduce recidivism. The services should be available for those remand and sentenced prisoners.

**Screening and Assessment of Needs**

Screening create an opportunity to identify, engage and treat especially acute mental disorder in this group of populations [53]. They required a more specific module of care and clear care pathways as a result of the screening outcome, as many did not receive proper referral and care when needed [54]. If the process done efficiently, it will form an access for the prisoners to get through the pathway needed care and prevent incidence such as suicide and violence related to untreated acute psychosis or depression. This will also create a safe prison environment for all the other prisoners and the prison officers.
The screening process should be brief, easy to administer in a short time. Importantly, the tool used also must be effective in detecting mental condition that need urgent attention and able to exclude those who did not require services. It was recommended that the screening will elicit better findings if administered by trained healthcare worker. Four factors that best predicted presence of mental disorder are history of self-harm, past psychiatric care, serious charge and prescriptions of antidepressants prior to remand [55]. The outcome of the screening would be able to determine the type and intensity of care the prisoners should receive [56]. In one Australian study, prisoners were followed up within 6 months post screening, and 21.5% of the prisoners have mental disorder. They also found out that, the prevalence of mental disorder was highest when the time of re-interview was closer to the time of screening; 27.9% at 1-2 months. Unfortunately, for various reasons, lost to follow up interview was also highest among remand prisoners [57].

There are many screening tool used. Six most commonly tools are Brief Jail Mental Health Screen (BJMHS), the Correctional Mental Health Screen for Men (CMHS-M), the Correctional Mental Health Screen for Women (CMHS-W), the England Mental Health Screen (EMHS), the Jail Screening Assessment Tool (JSAT), and the Referral Decision Scale (RDS) [58]. A two-stage screening process may be suitable. High false positive in the first stage can be high, thus second stage act to identify those in utmost need for the service [59]. Three stage screening process is also suggested which include routine, universal screening by prison staffs upon reception to identify prisoners who need more urgent attention, a more in-depth assessment within 24 hours by mental health professional and lastly a comprehensive psychiatric evaluation when the prisoners acutely disturbed [60].

**In-Prison Care**

How the prisoners respond to the stressful prison’s environment differs. The in-prison care should be tailored and adapted to each prison and individual prisoner according to needs including vulnerable groups in the prison populations, for example suicidal behaviours and learning disabilities. Treatment addressing substance misuse is also important as evidence demonstrated high prevalence of substance use disorder or as comorbid with mental disorder. Female offenders with mental disorder also require specific approach to cater for their needs that might be different from the male offender [61]. In-prison care aims to facilitate the continuity of mental health care and the movement of the prisoners through the prison system. Ideally, interventions in prison include pharmacological approach, psychotherapy such as cognitive behaviour therapy (CBT), interpersonal therapy (IPT), dialectical behaviour therapy (DBT) and group therapy not to mention rehabilitation programmes. There were evidences that support psychological interventions [18].

To give some example, Singapore Prison Service formed Prison Housing Unit (PHU) in collaboration with Institute of Mental Health (IMH). The service manages prisoners with mental disorder by not only pharmacologically but also involve structured rehabilitation programme to prepare the prisoners to reintegrate back to community upon discharge [62]. Another example is prison mental in-reach teams (PMHIT) in UK [63, 48]. The service aims to manage mentally disordered offender in custodial environment by crisis and assertive outreach team. It is similar to community mental health team in its concept. In US
since 1990s, there are initiatives so-called green prison programmes. It’s a form of eco-therapy for prisoners through gardening and horticultural activities [64]. Two reported good outcomes are low recidivism rates and improved mental health.

Meta-analysis on the outcome of interventions for prisoners with mental disorder found improvement on functioning but not necessarily their mental health outcome [65] and improvement in adjustment and behaviour in prison by effectively improving their ability to cope with problems and reducing distress symptoms. Programs that targeted specifically the mental disorder and criminal justice needs showed reductions in recidivism significantly [66].

**Post-Release Care**

The most common and immediate needs are housing and employment, which play a role in reducing recidivism [67]. The prisoners often had comorbid of physical, mental and substance abuse problems and they did not receive appropriate treatment while in prison and care does not improve either after post-release. Recidivism itself are affected by the ex-prisoner ability to reintegrate and adjust in the community [68]. The authors then argued that four factors are involved in this process: individual, family, community and existing policies. A good in-prison mental health service will increase the chances to have better outcome and successful transition into the community [69] and the services must respond to the ex-prisoners needs [70]. Those who participate in community mental health service, and parole supervision fared better especially so if they are mentally stable [71] especially if involve intensive specific programme that include housing support, substance abuse problems and involved multi-agency collaborations [72]. Interventions specifically targeted the mental health and criminal justice needs, significantly reduced relapse and criminal recidivism [66].

Reducing reoffending is greatly important since 58% of offenders re-entered prison in two years, and 70% suffered at least two mental disorders, office of the deputy prime minister of UK published a report addressing this issue [73]. The report highlighted 9 key factors that influence re-offending that include education; employment; drug and alcohol misuse; mental and physical health; attitudes and self-control; institutionalisation and life-skills; housing; financial support and debt; and family networks. The report also made recommendations on how to addressed the issue such as going straight contract, national measure to tackle ex-prisoners need, financial and housing. Extended throughcare program in Australia focuses on five core areas, accommodation, health, basic needs, income and community connections [74].

**Current Service in Malaysia**

In Malaysia, under the provision of Section 14 of the Prison Act 1995, health care services in the prison is the responsibility of ministry of health which supply the medical and dental officer. Under Section 15, these officers are under the purview of prison commissioner while working in the prison. Section 36 on the other hand, directed mentally disordered prisoners to be managed in a mental hospital or other place deem fit to be safe for such purpose [75]. However, the process of transfer is not straightforward. The provision also applied to only sentenced prisoners. The problem arises for remand prisoners when Section 36 does not apply.

Prisoners are under the purview of prison
department. Prison health services run by a team of medical staffs borrowed from Ministry of Health, consists of medical officer, assistant medical officer, assistant pharmacist and nurse, they are assisted by uniformed prison officers (medical orderly). The mental health services are not standardized. Some prison received monthly visits from psychiatrist and/or psychiatric medical officers, and another bring the prisoners to the nearest psychiatric clinic for assessment and follow-ups.

Prison health clinic functions are similar to health clinic under Ministry of Health. The services offered are health screening for new prisoner, daily outpatient clinic, emergency treatment (after office hours), psychiatric treatment, methadone substitution therapy, dental treatment, monitoring of prisoners under specialist treatment and follow-up at Ministry of Health facilities, infectious disease prevention, control dan treatment program and health education. Detection for prisoners with mental disorder are implemented in few stages: a) health screening upon reception; b) prisoners with symptoms will be referred to the outpatient clinic. This will be done by prison officers in blocks or during rehabilitation programs. Counselling by counsellor is also offered; c) psychometric assessment by clinical psychologist. e.g. The Depression, Anxiety and Stress Scale (DASS). The test is done within 14 days of reception. Abnormal results will be referred to medical officers for further assessment. Prisoners with symptoms of mental disorder will be referred to government hospital with psychiatric services as there is no in-house psychiatrist in the prison. Delays in bringing the prisoners due to various reasons are not uncommon.

**Challenges**

As there is known relationship between mental disorder and offending, better mental health services engagement might reduce incarceration or reoffending of people with mental disorder. Looking at the current state of mental health service caters for prison’s populations in this country; obstacles are ahead of us. A coherent but realistic approach are needed. Challenges faced by mental health professional managing prisoners with mental disorder can be due to; high consultation rates in prison; prisoners’ poor reliability in giving history; non-compliance with treatment planning; personal health neglect and destructive behaviours; poor clinical information and support systems; understaffing and poor service planning [76]. Other issues that warrant attention is substance in prison [77] and whether Mental Health Act should apply to mentally disordered offenders in prison or the current statutes should be improved. Specific programmes for personality disorder, intellectual disability, women, sexual offender, dementia and violence should also be addressed apart from pre-prison services including liaison and diversion services. With all these, where do we start?

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