18TH INTERNATIONAL
MENTAL HEALTH
CONFERENCE

MENTAL HEALTH AND THE JOURNEY OF LIFE

Sea World Resort Conference Centre
21 - 23 August 2017
anzmh.asn.au/conference
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Second Stage Development of an Early Screening Tool for Detection of Vulnerability to Developing Schizophrenia or Related Conditions.

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Paper presented at the
18th International Mental Health Conference
Conference Centre, Sea World, Gold Coast (QLD), 21-23 August 2017
ABSTRACT: Neurodynamic theory of schizophrenia accounts for the non-psychotic trait abnormalities that are characteristic of the mental health issue. These abnormalities are enduring traits present before, during and after a psychotic episode and may become manifest in teenage years. Hence, there is potential to use these traits to identify risk at this stage for the purpose of intervening early with education, resources and support to guide at-risk individuals to utilise their potential strengths, and assist with the inevitable challenges that such a mental health issue may bring. The traits are enduring and not dependent on prodromal symptoms but on everyday activities, enabling earlier detection. Quantitative analyses of 600 individual responses identified 13 items that were able to predict whether an individual would fall into the schizophrenia or non-schizophrenia group to 85% accuracy, with no mention of ‘psychotic symptoms’. This paper describes the development of a potential screening tool for young people that is based on a psychobiological theory backed by empirical evidence. It defines trait abnormalities that can be independently assessed by questionnaire that is easily administered, inexpensive, with innocuous items potentially suited to young people. The 13 items, in combination, accurately predicted schizophrenia to 85% accuracy in the sample with no mention of psychotic symptoms. Proposal for stage two of the instrument development is being undertaken through Flourish Australia in a longitudinal study to be carried out with a teenage population.

Keywords: Early detection, early intervention, schizophrenia, trait abnormalities, neuroscience

In 2010 the PhD titled “Non-psychotic traits of schizophrenia as abnormalities of cerebral asymmetry: Development of a potential early screening instrument” (Ball 2010) aimed to provide the basis for future development of an early screening instrument to identify individuals at risk of developing schizophrenia (or related disorders¹). This paper outlines the backdrop from the thesis to the next stage of this endeavour.

The research is based on a neurodynamic theory of schizophrenia (Miller, 2008) which accounts for the non-psychotic trait abnormalities that are characteristic of the disorder. These abnormalities are enduring traits present before, during and after a psychotic episode and may become manifest in teenage years. Hence there is a potential to use these traits to identify risk at this stage for the purpose of intervening early with supportive, and educative resources to guide at-risk individuals to utilise their potential strengths, and help with the inevitable challenges that such a disorder may bring (Ball, 2010).

¹ which is implicit when using ‘schizophrenia’ from here on
It must also be acknowledged that not all people who have a lived experience of a mental health issue accept the experience as abnormal, but rather as a part of the rich tapestry of life and one’s personal journey. This research by no means seeks to judge personal experience, in fact an underlying tension that exists in this project is the mechanistic reduction of whole persons to be determined by biology while holding the view that all life has meaning including the experience of schizophrenia (Ball, 2010). Early detection however, may serve to enhance personal control and life trajectory via access to meaningful supports, education and resources.

Premise of theory

The theory is based on a premise that there is a relative absence of rapidly conducting cortico-cortical axons thought to be associated with functions normally preferred by the right hemisphere. Most functions (but not all), that signify a trait abnormality in schizophrenia, come into this category. This suggests that schizophrenia has homogenous origins that manifest in a number of different impairments (Miller, 2008). The traits correspond broadly to two cortical states, the ‘upstate’ and the ‘downstate’. They were resolved further into 13 ‘a priori’ subject areas of function. These a priori categories were assessed in an instrument (the Schizophrenia Traits Questionnaire, or STQ), consisting of 96 statements about everyday experiences, to be rated on a 5-point Likert scale.

In order to test the theory as the basis for a potential early screening instrument, it was necessary to examine the large-scale correlational structure of the 96 items deriving from it, using Factor analysis. A second aim was to assess whether the 13 a priori categories could reliably distinguish schizophrenia and the general population. The third aim was to find the combination of the items in the STQ which can best predict whether an individual will fall into the schizophrenia group or general population group with a high level of accuracy (Ball, 2010).

Background to the concept of trait abnormality.

Kety et al (1968) conducted an adoption study of 306 relatives of adoptees. Psychiatric diagnoses of relatives were compared between adopted infants who developed schizophrenia
and those who did not. Diagnoses for the comparisons included schizophrenia spectrum disorders and acute schizophrenia. 8.7% of the 150 relatives of the adoptees with schizophrenia, qualified for the ‘spectrum’ diagnosis, as compared to 1.9% of 156 relatives of control adoptees. This was a highly significant difference. Further testing in Kety et al (1994) with chronic schizophrenia and ‘latent schizophrenia’, found the prevalence of these diagnoses to be ten-fold higher in biological than adoptive relatives of adoptees with schizophrenia. The point here is that the wider spectrum of schizophrenia appeared to be inherited from biological ancestry rather than from adopted family.

**Traits of schizophrenia as extremes of personality type**

This lends support to the idea by Claridge (1972) that schizophrenia is not a categorical mental health issue, but emerges out of a personality that merges with normal psychology and range of personality types which has biological links in its extreme range. He asserted that there are traits in schizophrenia that “represent, in an exaggerated form, cognitive and personality characteristics found distributed in the general population” (Claridge, 1972, 15). Such concepts were not new even then. A connection was originally made by Pavlov (1941) between personality variants based on styles of information processing, and the physiological function of the brain (as with Eysenck in 1947). Claridge revisited this issue in 1987 reviewing psychophysiological, neuropsychological and hemispheric laterality studies and found a variety of personality scales that distinguished schizophrenia from the general population, and also identified a proportion of healthy individuals in the population that were not defined as having mental health issues. These were part of the developments leading to the idea that state and trait aspects of schizophrenia could be distinguished.

**Positive and Negative paradigm**

More recently the concept of a ‘continuum of psychosis’ was developed by Crow (1990) ranging from schizophrenia in its various forms, to schizoaffective disorder, bipolar affective disorder and unipolar depression. Another simplification originated in nineteenth century neurology (in the writings of Hughlings Jackson) and was used more recently by Crow (1980) and Andreasen and Olsen (1982). It was applied to the positive and negative distinction, where positive symptoms are abnormal because they contain something added to ‘normal’ function and negative symptoms abnormal through missing attributes of ‘normal’.
**Liddle’s 3-factor definition**

Although not fully accepted in terms of an official definition for schizophrenia, in 1987, Liddle performed an important factor analysis from the data collected from 40 patients with chronic but stabilised schizophrenia. This revealed something more complex than the simple dichotomy of positive and negative symptoms to define schizophrenia. It is included here because it reflects more closely the findings in Ball (2010) and forms a better paradigm for the theory behind trait abnormalities (Miller, 2008). The three main factors are ‘Psychomotor poverty’, ‘Disorganisation’ and ‘Reality distortion’. Miller’s theory attributes the former two to a basic instability of cortical states in stabilised schizophrenia. This is encapsulated in the terms ‘downstate’ and ‘upstate’ which are basic to the theory and underlie many of the traits. Ultimately in Miller’s theory, they are consequences of slower-than-normal axonal conduction in this disorder. Such instability of mental activity leads to a vulnerability to the development of psychosis, of which the third factor, ‘reality distortion’ is a low-level reflection (Miller, 2008).

**Early Intervention and Detection**

Schizophrenia often has devastating consequences for the individual and family. Since treatment with antipsychotic medications only alleviates certain aspects of the illness, early intervention is being sought as having the potential to: “delay the onset of the illness, lessen its severity or, perhaps in some individuals, avert it entirely. Early intervention offers the promise of a decrease in personal and psychosocial collateral damage and might lessen the deterioration in functioning associated with the onset of the first psychotic episode” (Hawkins et al, 2004, p3). Over the last 25 years there has been a proliferation of clinical and science-based research into schizophrenia with emphasis on the onset phase as well as the establishment of the International Early Psychosis Association and International Conferences on Early Intervention. This has also brought a sense of optimism into what was initially considered a hopelessly deterministic “degenerative disease”, well stated by Phillips et al: “This shift in focus is associated with growing optimism toward the treatment of the early phase of illness and the recognition that these illnesses may not be as intractable as once thought” (Phillips et al 2002, 930).
**Duration of Undiagnosed Psychosis (DUP)**

Duration of Undiagnosed Psychosis (DUP) is an important concept related to the ‘Early Intervention’ of Schizophrenia, and more specifically to secondary prevention. The Research into DUP provides justification and validation for the emphasis on intervention coming earlier rather than later. There is some debate over whether DUP is a predictor of outcome of first episode psychosis. Larsen *et al* (2001) in a review of the literature found 15 studies up to 2001 that showed a statistically significant correlation between long DUP and poor outcome (Ball 2010).

**Development of traits as competition for brain resources**

The onset of psychosis is most reliably characterised by positive symptoms (delusions, hallucinations and thought disorder), however, 70% of patients develop negative symptoms earlier than they do the positive symptoms, in the prodromal phase (Häfner *et al*, 1992). The current research overlaps with a range of negative symptoms but includes characteristics (trait abnormalities) that might develop earlier than the prodromal phase often in teenage years, as competition for brain resources increase and are not matched by brain development in specific ways. Such characteristics exist on a continuum in the general population but appear to cluster in more predictable patterns which can be accounted for in a neurodynamic theory (Miller, 2008). Given the earlier development of negative symptoms and trait abnormalities that appear long before a psychotic episode, research is increasingly looking at this period in adolescent and early adult development for reliable and specific markers and vulnerabilities that reveal an individual at risk. The present research is unique in that it is generated from an actual theory of schizophrenia that has sought to explain the multi-paradigmatic research on schizophrenia and related disorders in terms of brain theory. It has promise to lead to a method of screening for risk in the pre-morbid stage which is the purpose of this next stage in development of an early screening instrument (Ball 2010).

**Theory of Trait Abnormalities**

The previous study (Ball 2010) was conducted on subjects in the middle years of life. It is currently being adapted for use with younger people, but in the period earlier than the prodromal phase, when enduring basic symptoms prevail (rather than either the symptoms of the
prodromal phase or those of more acute psychosis). In neuropsychological and cognitive research, there is evidence of many enduring functional traits not so well documented in clinical literature. Such research is performed mainly to understand schizophrenia rather than for clinical purposes. However, it opens the door to identifying ‘at risk’ individuals at an earlier stage than the prodromal phase. These traits are the basis for the questionnaire previously developed (Ball 2010), which is called the ‘Schizophrenia Traits Questionnaire’ abbreviated to ‘STQ’. At the initial stage the instrument was developed using responses from individuals with established schizophrenia (and others), but will be adapted and developed here for use in teenagers and young adults.

**Basic Neuroscience Underlying Theory**

The categories, from which the ‘trait abnormality’ items in the questionnaire were drawn, are explained partly ‘in terms of’ psychological concepts and partly neuronal concepts. Concepts such as spatial and temporal convergence and divergence (dispersion) are fundamental, not only to specialisation in each hemisphere, but also to understanding the loss, in schizophrenia, of the benefits of laterality, normally found in the brain.

Communication between nerve cells in the brain occurs via electrical impulses along their axons, and chemical transfer at the synapse. For a neuron to fire, a threshold potential must be reached, usually by summation of several synaptic influences. In the cerebral cortex, *excitation* occurs via cortico-cortical pathways which can be either local or distant. *Inhibition* is crucial to keeping the system in balance by extinguishing the excitatory signal after firing, and bringing the process back to a resting equilibrium. The spread of inhibition tends to be local to regions recently excited. There is little or no long-distance inhibition in the cortex (Miller, 2008).

*Myelination and effect on conduction velocity*

Nerve fibres or axons are morphologically of two types, myelinated and unmyelinated. The myelinated axons are surrounded by a myelin sheath made from lipids or multiple cell membranes which increase the conduction velocities for impulses. Cortico-cortical axons are a mixture of myelinated and unmyelinated axons. The calibre of both types varies greatly within a population of axons. Conduction velocity in axons is closely related to their morphology, the
large calibre and myelinated axons having higher conduction velocity than the fine calibre, or unmyelinated ones. For cortico-cortical axons, conduction velocity ranges from ~0.1 m/sec for the slowest conducting axons up to ~5 m/sec for the most rapidly-conducting ones (Miller, 1975; Swadlow, 2000). Conduction time varies over a more than ten-fold range amongst a population of axons. For a conduction distance of (say) 5 centimetres, it might differ from ~10 msec for the most rapidly-conducting axons, up to several hundred milliseconds for the slowest-conducting ones. The assumption is that axonal conduction time is a stable structural aspect of brain organisation (Miller, 2008).

**Integration Interval**

The ‘integration-interval’ is a term used by Miller (2008) which is crucial to his theory. The ‘integration-interval’ describes the interval within which inputs of an axon to a neuron can combine and summate, most effectively within ~10msec. The range of conduction times in populations of cortico-cortical axons are inferred by experimental methods because as yet this cannot be directly measured in humans. Assumptions made, enables understanding of a great deal of data, of many types, as discussed by Miller (1996, 2008). The cortex is specialised for different tasks and requires faster-transmitting, myelinated axons for some types of information processing and mostly slower-transmitting, unmyelinated ones for other processing.

**Temporal convergence and divergence**

As already indicated, convergence of a number of synaptic influences is normally needed to make a neuron fire an action-potential. ‘Temporal-convergence’ is a term used by Charles Sherrington, whose discoveries about the functions of neurons gained him a Nobel Prize in 1932. The term describes the process of summation of signals which are separated in time. Figure 1. below shows ‘space-time’ diagrams, illustrating these processes. Firing of a neuron occurs when converging signals reach a target neuron within one temporal integration-interval, which lasts about 10 to 20 msec. If the axons which convey these influences are rapidly-conducting (upper diagram), it follows that firing of the pre-synaptic neurons are also in quite close synchrony. If, however, the population of axons is generally slower-conducting, the conduction times in these axons will differ amongst themselves. Therefore, if impulses start in the pre-synaptic neurons at the same time, they will reach their destination at significantly different times. This is ‘temporal-divergence’ (lower left diagram): Signals in different axons
do not reach their target neuron in synchrony within a single integration-interval. They are dispersed in time (‘temporal-dispersion’) and may fail to make the post-synaptic neuron fire. For the signals in such a slowly-conducting population of axons to be more effective in firing a neuron, they must be initiated pre-synaptically at slightly different times (see lower right diagram) (Miller, 2008).

Figure 1: ‘Space-time’ diagrams to illustrate the relation between axonal-conduction time, and temporal-convergence and divergence. (Miller, 2008, 29)

Donald Hebb is regarded as the father of neuropsychology. In his book “The Organisation of Behaviour” (1949) he put forward the two seminal and inter-related concepts: (i) the basic entity for representing information in the cortex is not a single neuron, but a distributed cluster of neurons, more strongly connected with themselves, than with other surrounding neurons (ii) Connection strength is determined by synaptic-modification, dependant on the prior history of activation of a synapse. Specifically, when pre- and post-synaptic sides of a junction are repeatedly activated in close synchrony, the synapses become functionally stronger. Since this tends to happen when several synapses upon a neuron are activated together, synapses on any cortical-neuron become strengthened in groups, those that tend to be activated in close synchrony (Miller, 2008).
**Right brain (cell assemblies) versus Left brain (synfire chains) processing**

Hebb’s theory did not deal in detail with temporal relations between neurons in a cell assembly, but later development by Moshe Abeles (1982) presented a modification of Hebb’s concept, that connected neurons might fire in organised sequences, with precise timing between the firing of successive neurons in a chain. The essence of Miller’s theory of normal cerebral-asymmetry is that cell assemblies in the right hemisphere contain neurons activated in near-synchrony, while those of the left have longer delays between their respective firing, and so correspond in same ways to Abeles’ ‘synfire-chains’ (Miller, 2008).

Initially there was no coherent theory of normal-asymmetry from which the deviation in schizophrenia could be argued. A theory of normal asymmetry was developed by Miller in 1996 in a book entitled, *Axonal Conduction Time and Human Cerebral Laterality*. The book is based on the fact that, in general terms, in 90% of normal human brains there are specialisations of processing in the right and the left hemispheres. The book argues that the left hemisphere has developed a greater capacity than the right to assimilate patterns of events with time delays of up to a few 100 msecs, such as many of those in language, necessitating slower axonal-conduction of signals. In other words, the complex array of detail from a variety of sequential signals, occurring at varying times in a neural-system associated with language, requires a system that uses a ‘rich repertoire of delay-lines’. Miller explains the subtlety of left hemisphere specialisation in terms of the underlying premise as follows:

“The central hypothesis of the book is that the physical basis of the left hemisphere specialisation lies in the properties of the axons connecting together different regions of the cortex in that hemisphere. Specifically, it is suggested that in the left hemisphere there is a greater proportion of the fine calibre, slowly conducting axons than in the right. This means that, as far as direct monosynaptic cortico-cortical connections are concerned, there can be a greater temporal-dispersion of any signal in the left than in the right hemisphere. This in turn, it is argued, gives the left hemisphere a better capacity than the right for linking the representation of events which are separated in time (especially for short intervals of the order of 100 msec). This then allows the left hemisphere to represent short temporal patterns in greater detail and with greater accuracy than can the right hemisphere.” (Miller, 1996, 2)

In contrast to this, the right hemisphere has developed to process instantaneous patterns more effectively, necessitating rapidly-conducting axons from a rich array of signals that arrive at a target neuron more commonly within about 10 msec.
“The right hemisphere also has its own distinctive manner of specialisation. According to the central hypothesis this depends on there being a richer repertoire of cortico-cortical connections, with rapid (and, effectively, instantaneous) transmission in right than in the left hemisphere. This leads the right hemisphere to have a superiority over the left in representing patterns which are complex “instantaneous” conjunctions of signals, rather than complex temporal patterns. The obvious example of such “instantaneous” patterns are visual spatial patterns, and the term “spatial” will often suffice as a general label for the functions for which the right hemisphere has an advantage.” (Miller, 1996, 2)

Suffice it to say that the structural differences via axonal conduction velocities in the right and left hemispheres in ‘normal’ brains enable efficient processing of different signal patterns with different consequences for behaviour.

**Abnormal functional asymmetry**

In schizophrenia, there is known to be abnormal functional asymmetry (Flor-Henry, 1969, 1972; Andreasen, 1982), often amounting to slower-than-normal processing of some types of information. This is explained by the hypothesis that in schizophrenia, there is ‘a relative loss of rapidly conducting axons’, normally abundant in the right hemisphere, which ultimately manifests itself in the loss of asymmetry as explained above. Behaviourally this may affect the speed of processing information and in some cases whether some tasks will be accomplished at all, resulting in, for example, experiences of sensory overload, inability to switch attention easily or recognising a face.

While this could be an advantage in processing temporal patterns such as some of those in language, it is not advantageous in a network that needs instantaneous processing. Temporal-dispersion here will often mean a loss of function. In other words, if signals in the right hemisphere, for example, do not reach the target neuron within about 10 msec of the ‘other’ signals then summation or ‘convergence’ does not happen and the neuron does not fire. In schizophrenia, the specialisation of the normal right hemisphere is then lost, it becoming more like the normal left hemisphere, and the benefits of lateral-specialisation are lost. In effect, it is as though the schizophrenia brain consists of ‘two left hemispheres’, although this does not apply to all cerebral functions (Miller, 2008, 30).
Application of the Theory to Psychological Traits of Schizophrenia

The topic of trait abnormalities includes a large volume of psychological, behavioural and psychophysiological evidence. However, the emphasis here is on the psychological evidence, since the STQ is about whole persons.

There is overlap conceptually in some of the categories used in the questionnaire, so for economy of space and in order to outline how the theory/neuroscience explains the psychological traits I will only outline in detail the first area, in that of perception. For fuller discussion see Ball (2010) and Miller (2008). The list of categories underpinning the trait abnormalities tested in the STQ is as follows:

1. Perception
2. Motor Control
3. Cross-modal co-ordination and Interhemispheric co-ordination
4. Discrimination of the intensity of sensory stimuli
5. Attention – Vigilance/Sustained Attention
6. Speed of Learning
7. Excessive Association
   - Selective Aspects of Attention
   - Distractibility-
   - Sensory Overload
8. Impairment in short-term/working memory
9. Shift of Attention Vs Long Trains of Thought
10. Preference for Solitude – Avoidance of Social Activity
11. Overall Levels of Stability and Mental Activity
12. Language and Thought
   - Comprehension of Incoming Language
   - Production of Language – Subjective Experience of
   Trait Aspects of Thought Disorder
13. Sense of Self
Perception

Perception is the translation of sensory stimuli into organised experience. In the context of the theory here, variations in the stimuli reveal aspects of their processing. Dimensions of variation, such as intensity, duration, size, complexity, modality, fine temporal structure and side of presentation, reveal something of the differences in processing in the right as opposed to the left brain.

Gestalt perception

The literature on perception in schizophrenia covers visual, auditory, somatosensory, taste and olfactory modalities. A common way to test deficit in schizophrenia is in the perception of gestalts. Gestalts are patterns of sensory stimuli, the elements of which are present at the same time, rather than in sequence. The most common gestalts are visuospatial in stimuli such as faces. In the auditory domain, perceiving chords where several frequencies are to be perceived simultaneously is an auditory gestalt. In the somatosensory modality, recognising shapes via touch alone is another example. In the general population, gestalt perception is generally performed better by the right hemisphere. In the experimental literature deficits are found in all three modalities in schizophrenia.

The STQ contains items related only to visuospatial perception, mostly to do with face recognition. Recognising ‘an acquaintance’ by their voice rather than their face initially, for instance, is a sign of impairment in gestalt perception because the vocal quality depends considerably on fine sequential pattern recognition (and left hemisphere-type processing, which is relatively intact in schizophrenia). However, the questionnaire also includes some associated traits of general visual insensitivity to environment, such as not noticing what someone is wearing and potential preferences for listening to music rather than watching television (Ball, 2010).

In analysis of perceptual abnormalities in schizophrenia, two issues about perception in the general population are relevant. The first is the interaction between time and intensity of the stimuli for detection to occur. The second are the lateral differences in perception that exist in the general population.
**Time and Intensity of stimuli**

For the first issue, there is a relationship between time of exposure to a stimulus, objective stimulus intensity, and perceived intensity. This is a recognised relationship in psychophysics. For exposure-times up to about 150 msec, perceived intensity increases with increase in objective intensity but also with prolonging of the stimulus duration. (Miller, 1996).

As outlined earlier, for a neuron to fire, a threshold must be reached, usually by convergence of several synaptic influences. The stimulus intensity threshold for detection rises as the duration of the stimulus is reduced for stimuli less than about 100-150 msec. The lower the intensity, the longer the stimulus duration must be in order for the subjective criterion of threshold to be reached (Miller, 2008).

The main type of experiment used to test perception in schizophrenia is the ‘Critical Stimulus Duration’ design where a pattern of visual stimuli is presented for a short time, and duration is adjusted until the stimulus is just detected according to the criterion. In schizophrenia, it generally takes longer to detect a stimulus to the same criterion as in the general population.

This brings us to the second issue in discussing the relationship to perception in the general population. The right hemisphere appears to be specialised for more rapid integration of patterns such as gestalts, whose component parts are present at the same time. This applies to the visual, auditory and somatosensory modalities alike. Where ‘deeper’ levels of perception occur, such as when a greater level of analysis is required in the perception, a longer stimulus duration time is required for full integration because the neural pathways travel deeper into the visual system (Ericksen and Schultze, 1978). In a normal system, the longer the pathways the greater the temporal dispersion as a result of a wide range of conduction times in the population of axons. Along the way increasingly specific aspects of analysis of information will occur, characteristic of the sensory pathway up to that stage.

**Degraded images in schizophrenia**

In schizophrenia, a greater degree of intact image is required for recognition (Doniger et al, 2001). Impairments correlate with negative symptoms rather than positive symptoms.
Such deficits in perceptual closure, it was suggested, may contribute to the muted world experienced by people with persistent negative symptoms. Since many real-world stimuli are observed in fragmentary form, perceptual closure allows relatively automatic identification of objects such as a cat partially covered behind venetian blinds. This conclusion coincides with related items on the STQ for gestalt perception, in subjects’ general insensitivity to environment. “The correlation between the deficit in perceptual closure and the negative symptom score suggests that patients with negative symptoms may navigate a world that is form-impoverished and that the absence of salient forms may directly contribute to such diagnostic features as a lack of interest in the environment” (Doniger et al., 2001, 1824).

**Neural network type for gestalt perception**

According to Miller’s theory of trait abnormalities (2008), the type of neural network which would be necessary for recognition of gestalts would be one in which simultaneous convergence upon recipient neurons of signals from several sources could occur easily. This would be one where conduction time in axonal connections was generally rapid. In a network where conduction is slower, signals from converging inputs to a neuron would be dispersed in time, and simultaneous convergence would be less. Such a network may be good for recognition of brief temporal patterns (such as consonant speech sounds) but would not be good for recognition of visuospatial patterns (such as faces) or gestalts in other modalities or resolving occluded images of objects. Hypothetically, in the general population the right hemisphere has more rapidly-conducting cortico-cortical axons than the left, and it is this difference which gives the right hemisphere its superiority in gestalt perception. In schizophrenia, there is hypothetically a loss of rapidly conducting axons, and with it a loss of functions normally performed by the right hemisphere, including gestalt perception.

In the original work (Ball 2010) each category covered in the questionnaire, is explained with many samples of research to demonstrate and develop the overall flow of the theory upon which the STQ is based, however, due to limited space, this points the way to further reading.

**Overview of Methodology and Results**

In the original work, two versions of the STQ (‘STQ1’ AND ‘STQ2’) were tested on 300 mental health service users (MHSU) and 300 non-mental health service users (non-
MHSU). For both STQ1 AND STQ2, factor analysis was performed to assess the overall conceptual structure of the underlying theory. Power analyses were performed on each item in STQ1 to determine how many respondents were needed for the comparison t-tests to have ‘power’ (to reject the null hypothesis). Paired t-tests were performed on all 96 items of STQ1 to compare MHSU and non-MHSU participants. 30 items were eliminated, changed or refined to develop STQ2 (Ball 2010). Consent to seek a verified diagnosis (including some associated information) was given by 136/150 MHSUs. 75/136 had a verified diagnosis of schizophrenia. The results supported the corresponding 2 factors (of ‘disorganisation’ and ‘psychomotor poverty’) of Liddle’s (1987) 3-factor classification of the symptoms of chronic schizophrenia stated earlier. Paired t-tests were then performed on the 75 schizophrenia respondents matched to 75 non-schizophrenia respondents for age, sex and number of years at secondary school. These comparisons revealed statistically significant differences between groups in 56 of the STQ2 items, with no items giving significant challenge to the theory. Paired t-tests were also performed on a smaller group of 29 with a verified diagnosis of unipolar depression and 29 matched with schizophrenia. This was for the purpose of distinguishing statistically between schizophrenia and other mental health groups to eliminate the possibility that traits are associated with people with mental health issues in general rather than schizophrenia in particular. Reliability statistics (kappa) were performed on 62 repeated questionnaires (of non-schizophrenia respondents) over a 6 to 12 month period. Using the results of the factor analyses, t-tests and kappa statistics, groups of items were chosen to perform a Discriminant Function Analysis on 75 schizophrenia respondents and 150 non-schizophrenia respondents. A combination of 13 items was able to predict whether an individual would fall into the schizophrenia or non-schizophrenia group to 85% accuracy (Ball, 2010).

**Strengths of STQ**

Strengths that stand out in contrast to other early intervention instruments are: (1) The STQ is based on a psychobiological theory backed by empirical evidence (2) The theory defines trait abnormalities that can be independently assessed by questionnaire (3) The traits are enduring and not dependent on prodromal symptoms but on everyday activities enabling earlier detection (4) STQ is easily administered, inexpensive, with innocuous items potentially suited to young people (5) Thirteen of the items in combination accurately
predicted schizophrenia to 85% accuracy in this sample with no mention of psychotic symptoms (Ball, 2010).

Due to the fact that the original neurodynamic/psychobiological theory of trait abnormalities is unique and complex yet crucial to the understanding of the items chosen in the STQ, proper explanation and detail are deficient here. They are however, expounded in Ball (2010) and the original theory by Miller (2008). The theory comes from a wide analysis and collation of the literature, refined and tested in a number of ways in Ball (2010) to justify and verify the basis for the next step. The theory proposes that successful results can be replicated in a younger teenage population which would make an inexpensive early screening tool that helps to identify and detect early vulnerability to developing schizophrenia.

Next steps

The next step that is being undertaken through Flourish Australia, is the development of another version of the STQ, appropriate to teenagers, to target those already identified at-risk, and those with risk factors, (such as family members with schizophrenia; cannabis and other drug use in adolescence (Zammit et al, 2002); second generation immigrants (Harrison et al, 1988)), and predict whether, according to the questionnaire, they may develop schizophrenia, with follow-up in a longitudinal study. The benefits of early detection by other means apart from symptoms at onset are even more vital in the light of comments made by McGorry et al (2001), “The lack of a clear boundary between normality and psychiatric disorder … is especially relevant during onset, as syndromes emerge and progress from the origins which are indistinguishable from normal experience”. If successful, such a tool may change the course of a person’s journey to a safer and better understood, dynamic path on the way to a positive future.
References


Bridging Individual-Social Perspectives: Addressing Socially-Constructed Inequalities and Misconceptions via ‘Enabling Co-Design Environments’ (ECEs).

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Paper presented at the
18th International Mental Health Conference,
Bridging Individual-Social Perspectives: Addressing Socially-Constructed Inequalities and Misconceptions via ‘Enabling Co-Design Environments’ (ECEs).

ABSTRACT: Community-based mental health is positioned neatly to address mental health stigma and discrimination. If mental health can be framed through, not only an individual-lens, but also a social-lens, a recontextualisation of socially-constructed marginalisation, stigma, and discrimination surrounding mental ill-health is plausible. Viewing mental health through a social-lens affords shared space to collectively own, understand, and address higher-level systemic issues impacting mental health discourse and practice. This point is highlighted by NDIS funding allocations in Australia’s 2017 Federal budget. Much like disability, mental ill-health could be framed as a social phenomenon rather than an individualised problem. Although individualised approaches are humanistic and effective in meeting individualised needs, such approaches are typically restricted to ontologies of lower-level agency, and if not inclusive of a social-lens, may perpetuate epistemologies of us-versus-them and in-versus-out groups. With that said, how can Australia value individual lived-experience whilst concurrently incorporating a higher-level social-lens? Furthermore, what contexts and mechanisms are appropriate to enable and drive desired processes and outcomes in Australia’s reformative environment?

Co-design and enabling-environments encapsulate a pragmatic extension of holistic, recovery-oriented, trauma-informed, person-led, and community-based approaches. In doing so, co-design and enabling-environments offer a practical tool enabling valued individualised perspectives, knowledge, and skills, which may be reflected through an inclusive multi-focal lens. As such, co-design and enabling-environments may build capacity for collective social change, whilst fostering shared expertise, legitimacy, and power. Co-design and enabling-environments afford opportunity for mental ill-health and recovery to contribute to a social identity valuing diversity. A multi-focal lens perspective need not dismiss individual needs and agency; but rather encapsulate and enhance recovery-oriented person-led approaches to compliment the complex dynamics of interdependent social systems. In effect a person-led, co-design, social-lens approach could filter harmoniously through all levels of social interaction including individual, interpersonal, familial, group, community, organisational, political, social, economic, and environmental.

Keywords: co-design, inclusion, lived experience, mental health, stigma and discrimination.
Australian community managed organisations (CMOs) have accumulated over 110 years expertise championing equitable, mental health discourse, and treatment and support options (Community Mental Health Australia [CHMA], 2012). Yet, Government funding allocations for CMOs to deliver community-based mental health services were not realised until the 1950s (Craze and Plant, 2008). Nevertheless, CMO funding heralded a legitimisation of the psychosocial approach as a valuable compliment to traditional, mainstream, medical-model mental health treatments. The ethical-creep driving this paradigm shift gained ever-increasing momentum, perpetuated by social movements promoting more humane and equitable mental health treatment and support options (Butler and Greenhalgh, 2010). Throughout the 1960s to 1980s a subsequent period of deinstitutionalisation afforded CMOs fertile ground to reinforce the posited benefits of psychosocial and community-based mental health support options (CHMA, 2012).

Since 1992 Australian mental health policy has reflected need to establish a new equilibrium, rooted in an understanding of higher-level system determinates impacting mental health, and framed by recovery-oriented approaches including person-centred and trauma-informed care (Rickwood & Kerry, 2017). Despite establishment of a new rhetorical equilibrium, it is commonly agreed that systemic discursive change has yet to translate fully into practice (Rickwood & Kerry, 2017). Furthermore, rather than focusing on cross-sectorial power relations, or the relative utility of traditionally disparate schools of thought, alone, it is also agreed we may benefit from understanding interdependent systemic impacts of socially constructed mechanisms upon individual rights, agency, mental health, and well-being (Provan and Milward, 1995).

Complementing the ethical-creep toward more equitable and humanistic approaches, current Australian mental health policy reforms seek to enable greater citizen involvement in traditionally State controlled public services, including mental health treatment and support. Of particular relevance is inclusion of citizens, and more specifically, persons with lived experience, in the co-conceptualisation, co-design, co-development, co-delivery, and co-evaluation of mental health treatment and support services and programs (Titter, 2009).

Drivers facilitating a system-wide interdiscursive recontextualisation of deeply-engrained inequitable social norms and discourse may include individual voice, advocacy, and meaningful engagement; of which may contribute to grass-roots movements; adaptive
organisational and community leadership, mediating lower and higher-level discourse; reflexive higher-level governance and policy, enabling lower-level resource and capacity; plus education and research, reflecting emergent discursive shifts and informing best practice. Together these drivers may impact translative expediency of subsequent discourse into healthcare settings (Kitson, 2009), organisational culture (Hardy, Lawrence and Grant, 2005), inter-stakeholder engagement frameworks (Ryan, 2016), applied practice (Hughes, Allen, Doheny, Petsoulas, and Vincent-Jones, 2013; Vincent-Jones, 2011), and public policy (Smith, Fressoli and Thomas, 2014).

The Australian Federal Government acknowledges the Australian mental health system is disjointed (Department of Health [DOH], 2015). As such, recent policy reform and support programs, such as Partners in Recovery (Smith-Merry, Gillespie, Hancock, and Yen, 2015), seek to reflect increased appreciation of the complexities surrounding mental health and well-being, together with a need for more integrated and symbiotic cross-sectorial stakeholder interrelations in the provision of mental health treatment and support options. To meet reformative objectives, and bridge service gaps, traditional cross-sectorial boundaries must continue to converge, whilst maintaining their diverse functional independencies (Bromley and Meyer, 2014). That is, the direction and objectives of mental health community managed organisations and the public health providers are converging, yet nevertheless seek to espouse a degree of independence in respective roles and responsibilities. Furthermore, CMOs possess required organisational capacities to lead an integrated and sustainable mental health system, whilst offering greater flexibility to adapt to changing system-wide needs (Rosenberg, 2017).

Inequitable socio-cultural contexts, mechanisms, and outcomes are characteristically borne by higher-level system discourse, reflected in language, norms, culture, place, politics and economics. Each of which have independently and interdependently contributed to reduced opportunity for individual self-determinism and agency, and in turn have perpetuated inequitable distributions of opportunity, power, resource, and other capacities. As such, these higher-level determinates impact access to housing, employment, education, and other social determinates of health and well-being, and in-turn may adversely impact individual capacities for enhanced mental health and well-being (Commission on Social Determinates of Health [CSDH], 2008).
By viewing mental health through a multi-focal individual-interpersonal-social lens, shared space may be forged to collectively understand, own, and actively negate socially-constructed discrimination, inequality, marginalisation, and disadvantage impacting those with lived-experience of mental ill-health, and mental health system functioning. In doing so, mental health may also be viewed in light of other socially constructed phenomenon, rather than attributing causality of mental ill-health to individual bio-medical problems alone. In-out group ignorances, and us-them perceptions, may then be afforded space to shift and reform into understandings and respect for a diversity of individual needs relative to context, together with non-tokenistic higher-level actions promoting authentic inclusion, engagement, and participation of persons with lived experience of mental ill-health in contexts across social-levels.

Authentic, and valued, individual and group and social inclusion, may be an enabling mechanism for material, interpersonal, psychosocial, and political empowerment for persons with lived-experience of mental ill-health (Masterson & Owen, 2006); contributing to individual self-esteem and confidence (Forrester-Jones et al, 2006), well-being (Slade 2010), connectedness and sense of belonging (Maher et al, 2014), empowerment (Israel et al. 2004), and active citizenship (May, 2011; Mezzina et al, 2006). In doing so, social inclusion may offer hope for individuals and marginalised interests groups to, not only cope with every-day challenges, but also potentiate opportunity and capacity for meaningful higher-level engagement which in-turn may contribute to, and foster, individual growth and social capital (CSDH, 2008). In doing so, social inclusion of persons with lived-experience may implicitly reinforce human-rights and break-down inequitable and discriminatory discourse and practices. This may in-turn offer equitable platforms explicitly promoting fair participation, individual ‘voice’ and social capital development (CSDH, 2008). As such, authentic and valued inclusion individual participation, agency, decision-making, and rights may benefit if complimented by higher-level community, organisational, institutional, and societal mechanisms (Ocloo and Matthews, 2016).

Therefore, social inclusion may afford hope and opportunities for individualistic and social change. Yet social inclusion alone, may not necessarily catalyse desired system change. In order to achieve reformative policy objectives, it is essential that system stakeholders work in a collaborative, flexible, and adaptive manner whilst respecting and valuing the contribution of diverse stakeholder approaches; in doing so, building system capacity to meet a diversity
of interdependent stakeholder needs (Hughes et al., 2013). If service providers are to enhance landscapes of recovery and well-being, they may benefit from mechanisms ensuring authentic and valued inclusive engagement of persons with lived experience (Sayce, 2001). Furthermore, such mechanisms may yield greatest benefit if operating in environments less likely to cue negative associations with experiences of socially-constructed perpetuators of inequality and discrimination (Hewstone, 2003). Such mechanisms may respect individual needs by promoting dignity of risk whilst being driven by a hope for growth and enhanced opportunity to overcome antecedent contributors to existing need. Additionally, service providers must work closely to ensure a multi-focal lens does not detract from an individualised focus, or likewise, the limit the capacity of service providers to offer integrated supports. Therefore, a fair and equitable shared-ground among all system stakeholders must be developed, promoted, and reinforced, to foster symbiotic sustainable pathways, and enable and guide valued contributions of respective system stakeholders, whilst recognising the potential benefits and constraints of current and emergent system structures, functions, and resource upon respective stakeholder capacities.

The inclusion of persons with lived-experience of mental ill-health in environments promoting hope, voice, active participation, and expressions of identity, is confounded by extant social structures and contexts. Contextual-individual interdependencies are poignant in circumstances wherein individuals experience limited capacity for self-determined action due to ‘normalised’ context-driven marginalisation and disadvantage. Therefore, system stakeholders may also benefit by building capacity and a willingness to foster enabling landscapes for active and valued contributions of persons with lived experience toward change processes which may positively impact both individual mental health and well-being, and sustainable system functioning (CSDH, 2008).

To address adverse impacts of socially-constructed marginalisation and exclusion we are likely to benefit if we promote contexts and mechanisms championing and enabling positive and sustainable individual-group-social interdependencies. In doing so, stakeholders may contribute to pragmatic pathways enabling and nurturing enhanced individual well-being and social capital (Johnson and Haigh, 2010; Johnson and Haigh, 2011).

Enabling environments offer inclusive and equitable contexts affording capacity development for collective social change, whilst recognising and valuing individual lived-expertise,
legitimacy, power, and authority. The potential benefits of enabling contexts may be optimised if complemented by complementary mechanisms to drive desired change. Furthermore, if adopted in community mental health settings, inclusive of CMO and other non-public mental health support providers, such mechanisms and contexts may further potentiate more equitable engagement processes and effective treatment and support outcomes.

**Contexts and Mechanisms for Change.**

Of particular interest to this paper is the combination of enabling environment contexts and co-design mechanisms (referred to herein as) enabling co-design environments (ECEs). Mental health co-design refers to inclusive and equitable mechanisms enabling and championing democratic inclusion and engagement of persons whom use and offer mental health treatment and support products and services; the conceptualisation, design, and continual improvement of those very products and services. Therefore, co-design offers a practical tool to value and respect individualised perspectives, ideas, and lived expertise through active and meaningful engagement. The term enabling environments was coined by the Royal College of Psychiatrists and further refined by Johnson and Haigh (2010), and Haigh, Harrison, Johnson, Paget, and Williams (2012). Enabling environments are contexts or places specifically designed by persons accessing services to support equitable and cooperative engagement of persons experiencing mental ill-health and complex support needs with treatment and support providers and institutions (Cockersell, 2016). As such enabling environments offer an appropriate context for mental health treatment and support.

ECEs are likely to complement emergent treatment and support paradigms such as recovery-oriented, trauma-informed, strengths-based, person-led, community-based, and practice-based approaches to mental health treatment and support. ECEs may also promote humanistic principles by enabling choice and voice in decision-making, transparency and open communication, opportunity of access, and valued and legitimised lived experiences impacting across social levels. Thereby enabling environment contexts and co-design mechanisms are likely to potentiate inclusive and equitable engagement outcomes for persons experiencing mental ill-health. Furthermore, the flexible nature of enabling environments are likely to enhance individual short-term motivation for engagement, by focussing on, and meeting individual needs; whereas engagement in co-design initiatives may fulfil longer-term
individual motivations to achieve collective, socially-beneficial outcomes, by promoting a shared focus on the impacts of mental ill-health across the mental health system and wider-society (de Freitas, 2015). Furthermore, co-design mechanisms are likely to promote individual resilience by fostering individual, interpersonal, and group connectedness, meaningful engagement, hope, optimism, empowerment, and identity (Leamy, Bird, Le Boutillier, Williams and Slade, 2011).

ECEs promote sharing of knowledge, beliefs, perspectives, and purpose, together with tangible resource, to promote cooperation and collaborative decision-making leading to mutually beneficial processes, outcomes, and capacities for individuals, groups, and society alike (Hämäläinen Aro, Lau, Rus, Cori, and Syed, 2016). In doing so, ECEs also offer appropriate contexts and mechanisms to compliment the fulfilment of emergent mental health policy objectives (Johnson and Haigh, 2010; Johnson and Haigh, 2011). Therefore, ECEs may generate capacity, hope, and resilience, to not only overcome, but also and change, deeply-embedded systemic inadequacies.

An important factor in reducing discrimination and marginalisation of persons experiencing mental ill-health is equitable and cooperative engagement between in-out groups in contexts likely to disconfirm stereotypes supported by mechanisms promoting a ‘level playing field’ by removing barriers, and creating equitable capacities for meaningful engagement (Hewstone, 2003). Furthermore, Tonkens (2014) suggests democratic participation in multi-level equitable groups reduces discrimination through ‘privileging dialogues’ and realities of multiple individual experiences, for example by recognising and valuing mental health lived-experience expertise. Furthermore, enabling environments offer a highly responsive context likely to complement co-design mechanisms, and in doing so help negate pragmatic concerns surrounding power imbalances in multi-level co-design groups, including persons whom experience, or have lived-experience of mental ill-health (Lierville, Grou, and Pelletier 2014). As such, enabling environments and co-design may erode socially constructed barriers to social change and development of social capital by directly contributing to reduced discrimination and marginalisation of persons experiencing mental ill-health.

Ultimately, perhaps of greatest pragmatic poignance is that ECEs are grounded in individual, group, and social realities and removed from institutional or clinical settings. Therefore, ECEs also offer a context-sensitive platform to generate ecologically valid evidence more
suitable for effective translations into policy and practice. In turn, applied research findings derived from ECE ‘programs’ may inform development of best practice approaches for alternative localised ECE methodologies across different contexts (Parkes, Pyer, Wray and Taylor, 2014; Voorberg, Bekkers and Tummers, 2015; Smith and Bayliss, 2013).

**Enabling Environments.**

Enabling environments offer safe collegial spaces, with clearly defined boundaries and expectations, which may be flexibly adapted to meet localised needs and the agreed upon objectives of persons accessing supportive contexts (Tuurnas, 2016). As such enabling environments nurture meaningful engagement, equally valued contributions, transparent and shared decision-making, plus responsibility and ownership for group activities and outcomes (Johnson and Haigh, 2010; Johnson and Haigh, 2011). Furthermore, enabling environments foster shared understanding of individual and group needs through continual improvement processes of reflective practice (Falzon, 2006). Therefore, enabling environments are likely to provide an appropriate and responsive context for safe and equitable engagement of persons with lived experience of mental ill-health throughout the life-cycle of collaborative process.

Therefore, enabling environments may enhance individual coping and resilience by offering space for active engagement of persons with lived experience of mental ill-health in supportive, empathetic, and collegial group environments (Skovdal and Daniel, 2012). In doing so, enabling environments may foster a sense of belonging and social inclusion for once marginalised persons (Hansji, Wilson, and Cordier, 2014). Furthermore, enabling environments are likely to reduce power imbalances (Tonkens, 2014) and encourage persons with lived-expertise of mental ill-health to engage and voice their opinions and expectations without fear of reprisal (Prince and Prince, 2002), in a manner easily understood and respected by other persons contributing to the enabling social ecosystem (Johnson and Haigh, 2010; Johnson and Haigh, 2011). Therefore, enabling environments are likely to build capacity for individual recovery and well-being by supporting and nurturing psychological and functional growth in social environments (Haigh et al., 2012).

As such enabling environments may offer a supportive context for persons experiencing mental ill-health to contribute to collaborative processes in fulfilment of individualistic and
mutualistic goals and objectives. To do so, enabling environments foster collective ideology supporting and guiding collective action through shared direction, language, values, and subculture (Johnson and Haigh, 2010; Johnson and Haigh, 2011). Enabling environments also afford access to an increased pool of social, material, and affective resources, which may be drawn-upon by diverse actor-networks (Duff, 2011). Individuals engaging in enabling environments are therefore encouraged to explore and mobilise group resources in the conceptualisation, design, delivery and evaluation of tailored ‘place-based’ mental health support initiatives (Duff, 2012). In doing so, enabling environments may foster novel approaches to overcome wicked problems by promoting spontaneity, creativity, innovation, and experimentation (Johnson and Haigh, 2010; Johnson and Haigh, 2011).

Co-design.

Co-design of mental health treatments and supports, including programs, is much more than meeting the needs of persons accessing treatment and support services. Co-design also seeks to align multi-level stakeholder capacities and objectives to yield more sustainable system-wide outcomes for all. In doing so, co-design enables symbiotic system feedbacks and mechanisms, and in-turn fosters higher-level potential for capacity development. Co-design may promote and drive sustainable outcomes via collective processes fostering respective capacities to enhance social capital and individual resilience. As such co-design may complement recent Australian mental health reform objectives. Australian mental health policy reform promotes consumer and carer participation in co-design activities. As such, co-designers have legitimised opportunity to integrate valued expertise of mental health lived experience with the interests and capacities of different stakeholders in the development of mental health supports and services. In doing so, contributing to a more integrated and less disjointed mental health system.

Furthermore, inclusion of lower-level stakeholders in social capital development and system capacity enhancement provides opportunity to contribute to positive and valuable internal and social outcomes and change (Almedom, 2005). In-turn, co-design may provide a sense of citizenship, social responsibility, and personal and organisational achievement; enhancing individual self-worth, self-efficacy, and agency. Furthermore, through direct bi-directional engagement in multi-level collaboration, self-discriminatory, and actualised misconceptions and stereotypes surrounding mental ill-health may be dissolved affording greater opportunity
and hope for increased help-seeking behaviour (Henderson, 2013) and reduced discrimination (Lawrence, 2009).

Authentic mental health co-design seeks direct engagement and active contributions from persons who will ultimately access and facilitate the co-designed treatments and supports (Sanders and Stappers, 2008). Traditionally the ‘design’ of mental health treatment and support plans, services, and programs has been led by service providers and government funding bodies without directly consulting those who will inevitably be impacted by ‘designed’ mental health plans, services, or programs. It is reasonable to suggest a lack of consultation may have contributed to poorly designed, disjointed, inefficient, and less than effective support options, historically. In turn, adversely impacting the mental health and well-being of persons whom have accessed mental health treatments and supports, and limiting mental health system capacity and resource. Further, Donetto, Tsianakas and Robert (2014) suggest one of the most essential resources in healthcare systems, yet to be fully explored is persons who access mental health services.

Co-design may facilitate a rich diverse milieu of resources, perspectives, skills, and knowledge, derived from multiple vested interest stakeholders, of which may be integrated, and value-added throughout the co-creation journey (Cheverton and Janamian, 2016). Alternative trajectories, inclusive of the perspectives of persons with lived-experience, emerge from the cross-stakeholder interrelations during co-design processes (Steen, 2013). In doing so, co-design provides a mechanism for generating novel co-designed outcomes, which may concurrently benefit, and compliment mutual needs of respective stakeholders and wider-society alike (Bason 2010).

In doing so, co-design enables equitable and fair mechanisms to deconstruct social inequalities driven by unbalanced power relations between system stakeholders, of which, perpetuate inequality, marginalisation, and exclusion (Kitchin, 1998). Co-design promotes and increases safety, autonomy, and opportunity via shared responsibility, decision making, reciprocity, and trust; factors most likely to balance power differentials (Perkins and Repper, 2016). Furthermore, person-centered and person-led co-design may lead to beneficial system-wide outcomes, including those with lived experience of mental ill-health, and in doing so, co-design mechanisms may lead to normalisation of participation and inclusion of persons experiencing mental ill-health in socially valued activities, in turn negating or reversing
socially constructed discrimination and stigma. Furthermore, if benefits are mutualistic they potentiate symbiotic processes and sustainable outcomes for all stakeholders. Co-design provides an explicit means for promoting self-advocacy and inclusive networked participation that may lead to re-inclusion in complex social contexts, in effect transforming historical landscapes of marginalisation and exclusion into pathways of enablement and equity (Hall, 2005).

Co-design promotes an extension of the consumer movement championing the benefits of, and need to, shift power imbalances between service providers, policy makers, and person who access mental health treatment and supports via the legitimisation and normalisation of individual ‘voice’, agency, and collaborative decision making; rather than attributing individuals as passive and submissive agents compliant to decisions and actions of higher-level system stakeholders (Prahalad and Ramaswamy, 2004a; Prahalad and Ramaswamy, 2004b). Although the degree of individual choice, decision-making, and power in co-design may be restricted by multi-level collaborative process due to the need to meet multiple competing interests concurrently if appropriate contexts are in place, and reinforced, such power imbalances are less likely to re-emerge. For example, Kirsh and Tate (2008) highlight the adverse impact of power relations upon individual affect hence the need to cooperate, negotiate, and build trust through the use of shared tools and strategies in co-design activities.

Due to potential for power differentials between low and high-level system stakeholders it is imperative mechanisms for advocacy and safety, in multi-stakeholder inclusionary environments are promoted (Perkins and Repper, 2014). This is especially true in mental health co-design wherein persons with lived experience of mental ill-health may be more susceptible to inequitable co-design practices compared to persons who do not experience mental ill-health, especially if other co-designers come from positions of power and authority, known or implied. Furthermore, persons with lived experience of mental ill-health may have limited knowledge of group dynamics, business venturing, and meeting the objectives of funding or commissioning bodies. Saunders and Strappers (2008) suggest one means of reducing power imbalances in co-design teams is an appropriate balance of skill, expertise, and human resource derived from a variety of stakeholders, including persons with lived-experience whom are likely to access or use co-design outputs. Furthermore, if co-design facilitators are aware of competing constraints and capacities of respective co-designers by adopting a human-centred design mind-set, inclusive of empathic design
sensitivities (Roberge, 2013), potential power imbalances may be negated (Mattelmäki, Vaajakallio, and Koskinen, 2014).

Additionally, we need to encourage and foster direct and active contributions of persons who access services in the co-design of services they use, rather than contexts perpetuating passive receivership of system imposed services. In doing so co-designers may develop a sense of ownership for their contributions to co-designed processes and outcomes. Furthermore, by promoting ownership co-design fosters bottom-up leadership, and in doing providing another mechanism to help overcome power imbalances (Gee, McGarty, and Banfield, 2016).

According to Wang, Battocchi, Graziola, Pianesi, Tomasini, Zancanaro, and Nass (2006) three motives impact co-designer ownership of co-design processes and outcomes, each of which must be given high priority. The first motive is instrumental ownership. Instrumental ownership encourages co-designers to express themselves through person-led tools and techniques. Therefore, co-design teams must ensure tools and techniques utilised compliment co-designer skills, preferences, and capacities. Furthermore, as instrumental ownership focusses on the how and why of co-design processes it is likely to enhance engagement and minimise tokenism (Lee, 2008). The perceptive ownership motive suggests co-designer contributions should be given physical representation, for example co-authorship status in reporting and publications. A third motive is symbolic ownership. Symbolic ownership is an essential methodological driver of co-design and is likely to be enhanced if co-design contributions are made throughout the life-cycle of a product or service, including conceptualisation and evaluation (Voorberg, Bekkers, and Tummers, 2013; Simpson and House, 2002). Furthermore, symbolic ownership is more likely to occur if respective co-designer contributions are recognised, valued, and understood by co-design stakeholders (Wang et al., 2016). If co-design feedback mechanisms are unable to promote co-designer ownership of processes and outcomes, co-design contributions may be at risk of promoting unauthentic and tokenistic engagement (Voorberg et al., 2013). With that said, the level of experiential value experienced by co-designers is likely to reduce in circumstances wherein tokenistic processes negate co-designer ownership of the co-designed outcomes (Holbrook, 1999; Addis and Holbrook, 2001). Active participation of co-designers and ownership of processes and outcomes potentiates enhanced value for individuals and society alike (Costanza, 2017).
Future Directions.

Baldock (2007) suggests social welfare may refer to both individualistic well-being a well as collective well-being, highlighting the systematic interdependent nature of mental health and well-being across social levels. If we adopt a new form of the person-led approach, that is, social-centered/person-led we afford opportunity to view mental health through a multi-focal lens. ECEs offer pragmatic contexts and mechanisms to positively integrate and actualise social and individual perspectives of persons who access mental health treatments and supports (Melles, de Vere, and Misic, 2011; Lee, 2008). Much like the NDIS, the mental health system could be viewed a social problem rather than an individual problem alone. Much like socially normed perceptions of other forms of ‘disability’, mental ill-health could be accepted as part of a normed social identity, and in doing so, socially constructed stigma and discrimination surrounding mental ill-health may be reduced. This is not to say a social-centered approach would dismiss individual needs and agency, but rather encapsulate and enhance it, reflected through a greater understanding of individual mental health impacts relative to various nested social systems and their interactions. In effect, social-centered/person-led approaches could be employed across nested social levels including individual, family, community, organisational, social, economic, and political leading to emergent outcomes inclusive of social-wide mental health needs.

To better understand the iterative and non-linear process chain, and potential longer-term impacts of ECEs on individual mental health and well-being, organisational operations, improved system dynamics, and development of social capital, we require further research. Further research may yield a better understanding of which mechanisms of specific interventions work for different population groups, in various contexts enabling and nurturing recovery pathways and social inclusion for persons experiencing mental ill-health (Tew, Ramon, Slade, Bird, Melton, and Le Boutillier, 2011; Menear Gervais, Careau, Chouinard, Cloutier, Delorme, and Harvey, 2016). Further research may also contribute to better applied knowledges to reduce long-term stigma and discrimination (Thornicroft et al, 2016), and ultimately enable equitable and humanistic system-wide change (Arbour, 2017). However, traditional methods are problematic for evaluating complex programs. Timely and ecologically valid research is essential for rapid translations of evidence into practice, policy, and social discourse. This is imperative considering Australian mental health policy reform promotes co-design as a preferred means of developing and evaluating, treatment and support
plans, services, and programs with persons accessing and offering mental health treatment and supports.

Traditionally, the complex, flexible, and real-life nature of context sensitive approaches could be considered problematic for generating rigorous research findings for informing effective and timely translations into practice and future policy (Cook et al., 2017). Nevertheless, ECEs are likely amenable to context-specific, adaptable, and applied research methods such as action research, realist synthesis, and other theory-driven approaches (Staley, Buckland, Hayes and Tarpey, 2014). As such research may be conducted ‘on the fly’ embedded in applied settings, and translated and disseminated more rapidly into similar contexts; in doing so, informing localised continual improvement processes (Langlois, 2016). In doing so, ECEs are amenable to gathering process evidence of iterative and non-linear causal chains, of which may be suitable for informing scaling-up process (Paina & Peters, 2011), evidence of outcome impacts (Greenhalgh, Jackson, Shaw, & Janamian, 2016; White, 2009), as well as evidence of translative utility (Searles et al., 2016). Likewise, future research could seek to gain a better understanding of how enabling environments and co-design may best contribute to individual and social well-being in a sustainable socially responsible manner (Bassi & Vincenti, 2015; Thorpe and Gamman, 2011). Ultimately, in order for alternative research methodologies to contribute to sustainable system capacity development, mental health service providers and education institutes require a larger proportion of the public research funding pool (Thornton, 2016).


mental healthcare: protocol for a systematic and realist review. BMJ Open, 6(9), e012949. http://dx.doi.org/10.1136/bmjopen-2016-012949.


Australian mental health workforce: State and national policy imperatives and implications for workforce development.

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1 Abstract

Australia’s mental health sector is undergoing a period of intense reform, reflecting worldwide shifts in the way governments deliver mental health services. This will have major implications for the configuration of the mental health workforce now and into the future.

Every Australian state and territory has new or amended mental health legislation, and since October 2015 five of the eight states and territories have launched new mental health strategic plans. Services are becoming more integrated and new partnerships are emerging, breaking down the old workforce silos. Amongst these developments, the mental health workforce, the people and disciplines who actually deliver mental health services, have been in a similar state of flux. The shift to competitive tendering has seen a significant rise in the community managed workforce, and peer workers, consumer and carer representatives. Deinstitutionalisation has seen a corresponding increase in the largely unpaid carer workforce. In the midst of this changing landscape, the policy agenda which guides the development of the mental health workforce is a sentinel factor.

This presentation draws on a systematic descriptive policy review undertaken to synthetise the state of contemporary Australian mental health workforce policy, reviewing 7 national level policy documents and 10 state and territory policy documents. Key trends are identified and the implications for future of the mental health workforce development will be discussed.

Introduction

Australia’s mental health sector is undergoing a period of intense reform, reflecting worldwide shifts in the way governments deliver mental health services. These shifts are complex and sometimes contradictory, with the emergence of the recovery movement, a focus on early intervention, consumer rights and a growing appreciation of the societal impacts of poor mental health. In the wake of the Convention on the Rights of Persons with Disabilities (2008), every Australian state and territory has new or amended mental health legislation and since October 2015, five of eight states or territories have launched new mental health strategic plans.

Amongst these developments, the mental health workforce, the people and disciplines who actually deliver mental health services, have been in a similar state of flux. The shift to competitive tendering has seen a significant rise in the community managed workforce, and deinstitutionalisation has seen a corresponding increase in the largely unpaid carer workforce. Peer workers, consumer and carer representatives are becoming more common in the paid workforce, reflecting an increasing application of recovery principles.
Governments are paying attention to workforce development for a number of reasons, including the social and economic costs of neglecting mental health care (OECD, 2014). In 2011, Health Workforce Australia (HWA, 2012) declared that prevailing approaches to workforce development would lead to a widespread shortage of doctors and nurses and widespread underfunding of services. It concluded that increased training alone would be insufficient to address these issues.

Much of the literature in this area has focused on areas reflected in current Australian policy, as outlined below. These include reviews of program and services (Hungerford & Hodgson, 2013; Li, et al., 2015), reviews of policy initiatives (Hoge, Wolf, Migdole, Cannata, & Gregory, 2016; Jones & Brideson, 2009; Hinrichsen, 2010), training (Wheeler, Fowler, & Hattingh, 2013), particularly multidisciplinary training (Lyon, Stirman, Kerns, & Bruns, 2011; Martin, 2016), the size and diversity of the workforce (Bruckner, et al., 2011; Ivey, Scheffler, & Zazzali, 1998; Kunik, et al., 2016), workforce retention (Perkins, Larsen, Lyle, & Burns, 2007) and the need for practice standards (Goodyear, et al., 2015).

This paper describes a descriptive policy review undertaken to synthase the state of contemporary Australian mental health workforce policy, reviewing seven national level policy documents and ten state and territory policy documents, with at least one from each state or territory. It first examines national workforce and mental health planning and policy documents, and then provides a summary analysis of workforce policy positions contained within each state and territory’s mental health plan. Although there is some variation in the maturity and implementation status of the various plans, the National Mental Health Workforce Plan and Strategy are current until 2021 and five of the eight state and territory mental health plans have been launched since October 2015. As such they represent contemporary thinking and approaches to mental health policy.

2 Methodology

Following a rigorous review of the available policy documents, 17 were identified as being meeting the selection criteria.

National Policy

National policy does not have clearly defined boundaries. The documents below represent both standalone Commonwealth Department of Health policies and national policy developed in partnership and with the mutual agreement of all states and territories.

The criteria for selection of national mental health policies where:

1. Official endorsement by the Commonwealth Govt, the Council of Australian Governments (COAG) or a statutory National or Commonwealth (Eg National Mental Health Commission or Health Workforce Australia).

2. The policy is currently active, or is the most recent endorsed policy. Some policies (eg The 4th National Mental Health Plan) are no longer current, however the next iteration is yet to be released (eg the 5th National Mental Health Plan and Suicide Prevention Plan, due for release September, 2017.)

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State and Territory Mental Health Policy.

To further examine the contemporary policy and thinking in mental health workforce each of the state and territory mental health plans were also reviewed. Some states have both departmental plans and mental health commission plans. In these cases, both documents were included in the analysis, resulting in a total of 10 policy documents reviewed.

The selection criteria for state and territory mental health policies were

1. The policy is an officially endorsed policy of the relevant state or territory government, this could be either of the relevant health department or mental health commission
2. The policy is currently active, or the most recent iteration.

Applying this selection method resulted in 7 national policy documents (see Table 1) and 10 state and territory policy documents (see Table 2) encompassing the latest in Australian contemporary mental health policy positions. In both state and national policy, general workforce, or general health workforce documents were excluded unless a chapter was specifically devoted to mental health.
There was general health workforce policy document that prioritised mental health and devoted a chapter to this issue. This was thus included in the analysis.

This analysis was conducted in three stages. The first author conducted a systematic review of the relevant policy documents, identifying content regarding the mental health workforce. Key themes were identified and coded. The second author reviewed the same documents using qualitative data analysis software, (NVivo) searching for the thematic codes identified by the first researcher. Differences in analysis were identified and resolved between the two authors. This maintained the integrity of the thematic review process through cross-moderation.

3 National Mental Health Policy

Workforce comprises a significant component of all national mental health planning documents reviewed. In most of the plans reviewed, an entire chapter is devoted to workforce issues. In the Roadmap and the Fourth National Mental Health Plan workforce issues are included as sub-sections within the chapters of Improving Access and Quality and Innovation. Since the National Health Workforce Innovation and Reform Strategic Framework identifies mental health as a national health priority and a national health workforce priority this document has also been included in the analysis. Three of the documents reviewed focus solely on workforce issues.

a. Recurring Workforce Themes in National Planning Documents

All of the national and Commonwealth mental health and workforce documents were reviewed to identify major mental health workforce themes and priorities. This is summarised in Figure 1 and in Appendix 1. More detailed content related to each theme is presented in the separate spreadsheet entitled National Workforce Policy Themes.

Each of these policy documents devote significant attention to workforce issues. They have an extensive purview, relating to a wide range of stakeholders from across different sectors and jurisdictions. Nonetheless, there is substantial consistency with respect to the themes addressed within these documents.

There are two themes common across all these documents:

- Training
- Aboriginal workforce.

Other themes which appear repeatedly in these policies are:

- The need for cross-sector collaboration and development
- The expansion of the consumer, carer and peer workforce
- Support of the rural workforce
- The need for research and evaluation.
State and territory mental health plans

There is significant variation in the between jurisdictions, in length, scope and relationship to wider jurisdiction planning and policy. Some states have comprehensive and detailed plans of well over 200 pages. Others are brief summary documents of approximately 20 pages. Some of the plans cascade down from their state plan and health plan, appearing closely aligned and clearly related. In other mental health plans the alignment to other state policies is not evident. This can be an important distinction, as some plans refer and link to a state, or health workforce plan. As such the key workforce issues and strategies are outlined in these higher-level documents. This is further complicated by the different mental health governance structures apparent across jurisdictions. Nonetheless, a thematic analysis provides insight into contemporary themes in mental health strategy and planning.

An illustration of these plans across key workforce dimensions is presented in Figure 2 and in Appendix 2.
Almost every jurisdictional mental health plan specifically addresses workforce considerations. This highlights central role of the workforce in mental health service delivery.

With the overall analysis indicating that workforce is a key component of almost all the mental health planning and policy documents reviewed, the analysis explored current sub-themes and emphases in workforce development strategies. **Training** and **cross-sector engagement** emerged as predominant and interrelated themes.

**Training is a theme that appears on almost all planning documents.**

The training themes appear in 9 of the 10 state and territory documents. The specific areas of focus on the following recipients:

- Public mental health staff
- Mental health specialist clinical staff
- Health clinicians and emergency staff
- Primary health care personnel
- Community managed organisation and the private health workforce
- Peer workers
- Carers
- Staff in other government agencies, non-government and private sectors.

**Cross sector engagement** is also frequently discussed (in 9 of the 10 documents) and variously focusses on:

- Primary health care staff
- Acute care services
- Mental health staff in community managed organisations
- Consumers and families
- Staff in non-health agencies who come into contact and work with people living with mental illness. Specific sectors referred to here include:
  - Community services
  - Education
  - Justice
  - Housing
  - Employment.

The themes of training and cross-sector engagement are generally treated as distinct areas in the state and territory plans. It may be helpful to conceive of them as more interdependent. Training could be one way to establish and develop cross-sector relationships. Effective training will draw on expertise from across sectors, and staff need to be trained to engage in cross sector initiatives.
Figure 2. State and territory workforce themes.
Five other themes appear frequently in mental health plans:

- Improving cultural capability (5 of 10)
- Supporting and developing the consumer, carer and peer workforce (5 of 10)
- Developing a dedicated mental health workforce plan (5 of 10)
- Increasing the retention of staff (5 of 10)
- Shifting workplace culture to a recovery orientation (5 of 10).

These themes are also interdependent, with improvements in cultural capability and changes in workforce culture heavily influenced by training and cross sector engagement. One less obvious connection is the role to be played by the consumer, carer and peer workforce. Consumers and carers provide a perspective of the service system as it is experienced, and are well positioned to highlight gaps in service provision and areas for better cross sector engagement. They are also underutilised in training, particularly around cultural capability, and shifting workplace culture. The interconnectivity of these key themes is generally absent from the plans themselves, an issue which needs to be addressed in implementation.

Comparison between state and territory and national policies

As detailed above, there is good correlation between the state and territory plans and the national policy context, particularly in regard to training, cross sector engagement and engaging with the consumer, carer and peer workforce. Other themes, such as a focus on the rural workforce and research and evaluation are not reflected as priorities at the state and territory level but appear prominently in national policy.

The need to develop and support the Aboriginal and Torres Strait Islander workforce was widely recognised at the national level, although only a few states and territories considered it at all. Some were more committed than others. The Commonwealth, South Australia and Western Australia, for example, all recognise the role of traditional Aboriginal healers in providing mental health services to Aboriginal communities, while other states viewed Aboriginal people only as communities receiving services, not as workers delivering them.

5 Conclusions

Summarising the themes apparent across both national and state policy: training, cross sector engagement, consumer, carer and cultural considerations appear frequently.

There are opportunities for increased cross-sector collaboration in training to develop mental health skills, literacy and confidence. Adopting this approach would simultaneously address these two workforce development imperatives highlighted in Australian mental health workforce policy.

Developing collaborative approaches to training, supporting and equipping the workforce would result in mutual service enhancement and reduce unnecessary duplication.

Some attempts have been made to bring some of these issues together, for example the National Mental Health Services Planning Framework, which is designed to enable service planners to calculate the number and type of staff (but not their employer) needed to provide a comprehensive suite of mental health services to a given community. Whilst the National Mental Health Services Planning Framework has not yet been officially released, it has been used by Western Australia

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1 Victoria is the only state to complete this to date.
Omissions

There are some surprising omissions in both national and state mental health plans. Training is identified as a priority; however, this almost exclusively focuses on the clinical workforce, and clinical skills. Training in leadership would seem to be critical for implementing reform and cultural change. This is mostly missing. Training, support and development of the carer and peer workforce also appears to virtually absent. Further, it is remarkable that very little attention is given to digital platforms for the delivery and support of training.

It could also be argued that some of the main cultural shifts which need to occur are not foreshadowed in the plans. While they all acknowledge the need for workforce development and explicitly or implicitly refer to workplace culture, this belies the real challenge of mental health sector reform. Any approach which includes consumers requires a fundamental shift in the relationship workers have with the people they work with, and will not be achieved through a short training course or improved referral mechanisms. Aided by changes in the formal policy direction, fundamental change is coming, with implications of the Convention on the Rights of Persons with Disabilities, an ever more vocal consumer movement and a growing awareness of the value of recovery all reverberating on the paradigm of the mental health workforce. These changes will require other strengths not generally articulated in the policy documents; sector leadership, cultural change and a shift the very values which underpin this work.

Developing the non-traditional sectors of the mental workforce seems to be new policy theme not yet fully developed in practice, but which could yield substantial gains in workforce capacity and cultural capability. Across each of the common themes in Australian mental health policy opportunities exist for collaboration to increase service effectiveness and efficiency.

The Commonwealth has committed to work collaboratively with the other jurisdictions to implement the imminent Fifth National Mental Health Plan, building on the response to the National Mental Health Commission’s Review of Mental Health Programmes and Services: Contributing lives, thriving communities. All of the states and territories are also engaged in various reform processes, which will inevitably provide further strategic direction on workforce policy.
6 References


### Appendix 1. Summary of National mental health workforce priorities

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### Appendix 2. Summary of State mental health workforce priorities

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Closing the mental health treatment gap in palliative care

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Paper Presented at the  
18th International Mental Health Conference  
Conference Centre, Sea World, Gold Coast (QLD), 21 – 23 August 2017
ABSTRACT: Research shows there is a skills gap in the health workforce who care for terminally ill and palliative patients when it comes to identifying and addressing patients’ mental health (MH) concerns. The ‘Listen Acknowledge Respond’ (LAR) project was established to fill this gap by developing and delivering training for healthcare professionals (HCP) to address the MH needs of those living with dying, as well as investigating the impact of the training on HCP’s practice.

Surveys of HCP pre-training show 74% regularly screen for MH issues, yet less than half of respondents, on average, are not confident applying the five most commonly used assessment tools. In addition, strengths and solutions/task-focused practice are the most commonly used therapeutic approaches, with 57% of respondents using these regularly with their patients and their caregivers, however only about half of these respondents feel confident using these approaches.

Post-training surveys and phone interviews with HCP who attended the LAR workshops show HCP’s self-reported knowledge, skills and confidence in using MH tools and therapies has increased significantly since participating in the LAR training. This presentation will provide an overview of survey and interview findings conducted pre-training (baseline) and 3 and 6-months post-training.

Providing targeted training to HCP is an important approach to bridging this gap between mental and physical health service provision, and to improve the welfare of these patients along with their families and caregivers.

Key words: Palliative care, mental health, education, training, healthcare professional

Introduction

Chronic disease, including cancer and depression, is the leading cause of all ill health and death in Australia, accounting for about 85% of the total burden of disease (Australian Institute of Health and Welfare, 2014). Because of this, providing quality, evidence-informed palliative and end of life care for those with advanced chronic and terminal illnesses is fast becoming a critical area of health policy and health research. However many researchers state there is a skills gap when it comes to holistic palliative and end of life care (Hughes, Firth & Oliviere,
Christ and Sormanti (2000, pp.81-99) affirm “insufficient training of health professionals has often been cited as a major barrier to improving the system of care for dying patients and for the bereaved.” Christ and Sormanti’s (2000, pp.81-99) research pinpointed the “inadequate knowledge and appreciation for the complexity and the value of social work interventions in end of life care among other health or mental health professionals” as an “impediment to the advancement of the profession’s psychological services to the dying and the bereaved”.

This research highlights the issue of meeting the holistic needs of patients with advanced chronic and terminal illnesses. While much focus is given to the physical needs of these patients, their psychosocial and mental health needs often go undiagnosed and untreated (Whyte, 2011), highlighting a mental health ‘treatment gap’ in palliative care. For example, O’Connor, White, Kristjanson, Cousins and Wilkes (2010, pp. S44-47) showed that 45.8% of cancer patients were possibly depressed, 36.9% were possibly anxious and about 25% had probable combined anxiety and depression. Dilworth, Higgins, Parker, Kelly & Turner (2014, pp.601-612) systematically reviewed perceived barriers around health professionals providing psychosocial care to cancer patients, finding that workload, not being recognised as a patient need, inexperience, and lack of referral systems were key issues. Responding appropriately to these complex needs requires healthcare professionals to have a unique mix of competencies, knowledge, skills and attitudes, which primary health carers identify they lack (Whyte, 2011).

These specific skills and competencies are not currently addressed in qualifications or competency standards in most of the primary or allied healthcare fields. Much of the palliative care curriculum nationally and internationally focuses on medical and clinical/symptom concerns at the very end of life, while much of the palliative care literature and training focuses on palliation in oncology or managing “difficult conversations” with families and care-givers. Equally, courses offered in schools of social work and other allied health provide little exposure to this growing and important field of practice; for example a single (elective) unit or lecture on grief, loss, death and dying is generally available in most Australian social work programs, but isn’t core curriculum, for example Charles Sturt University’s Bachelor of Social Work and Masters of Social Work (Charles Sturt University Handbook, 2017).
The ‘Listen Acknowledge Respond’ (LAR) research project was established to address this skills gap by developing and delivering training for healthcare professionals (HCP) to address the MH needs of those living with an advanced chronic and terminal illness, as well as investigating the impact of the training on HCP’s practice. Two-day professional development workshops provide an introduction to responding to the mental health concerns of people living with advanced chronic and terminal illnesses. They address topics including: using psychological assessment tools and developing treatment plans; narrative approaches to assessment; using a strengths and narrative approach in advanced care planning; and using appropriate therapies. These therapies include; loss, grief and trauma; mindfulness; narrative; dignity; values; and acceptance and commitment. Learning outcomes for the workshops include: appreciating the impact the mental health ‘treatment gap’ has on the lives of people with advanced chronic and terminal illness; understanding the meaning people with advanced chronic and terminal illness ascribe to their symptoms, the psychological issues they face and the impact this has on their quality of life; and; competencies in planning and facilitating the delivery of MH interventions that are timely, appropriate and effective, and that address the deeper existential concerns of the patient and of their family members and loved ones.

**Methods**

Two-day professional development workshops were developed and are currently being delivered to groups of HCP who work with palliative patients across a variety of health care settings in metropolitan, regional and rural locations throughout Australia. Participation in the workshops is free of charge and voluntary. Participants were invited to complete online surveys before and 3- and 6-months after training, which comprised a mixed-method approach, using a combination of quantitative and open response questions. A proportion of participants also chose to participate in telephone interviews comprising open-ended questions, before and 6-months after training. Surveys and interviews were designed to record HCP’s self-reported knowledge, skills and confidence in using mental health tools and therapies before participating in training; and measure the changes in these attributes after the training. Because training and data collection is ongoing, these results represent preliminary findings. Data were analysed using a 2-tailed, two sample unequal variance Student’s t-test.
Results

Respondent demographics

Respondents were from a variety of locations in all Australian states and territories, with 46% located in metropolitan areas, 36% from regional areas, 17% in rural locations, and 1% from remote locations (n = 599). Approximately 94% were females and 6% were males (n = 607). Healthcare professionals from a range of occupations responded to the survey, with those most highly represented being social workers (43%) registered nurses (17%) and other nurses (13%) (n=599), see Figure 1. Respondents also work in a variety of healthcare settings (see Figure 2), most commonly hospitals (34%), community health (18%) and aged care (20%) (n = 599).

Figure 1. Occupations of survey respondents
Generalist practice skills were unaffected by MH training

HCP attending the training were confident in their use of generalist practice skills, with almost all respondents using respect, communication, listening, compassion and empathy with their chronically or terminally ill patients. The workshops had little impact on HCP’s confidence in using these skills, ranging from 98-99% confidence for all five skills both before and after training.

HCP were asked to nominate the five most important generalist skills used in the last 12-18 months of their patients’ lives and in the last 3-6 months of their patients’ lives. From a list of 20 generalist skills ‘patient-centred approach’, ‘listening’, and ‘holistic care involving the family’ were in the top five across both end-of-life stages. While ‘advance care planning’ and ‘communication’ were considered more important in the last 12-18 months of life, ‘pain and symptom management’ and ‘compassion’ were deemed more important in the last 3-6 months of life. There was very little difference between the responses prior to and 3-months after training (see Table 1).
Table 1: Most important generalist skills at end-of-life stages

<table>
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<th>Skill</th>
<th>Pre-training (n=535)</th>
<th>3-months after training (n=119)</th>
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<td>Holistic care involving the family</td>
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<td>Listening</td>
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<td>Holistic care involving the family</td>
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Percent of respondents selecting skill as one of the top five most important skills

When HCP were presented with a list of 18 skills and asked to select the most important for assessing the psychological and psychosocial needs of their patients, there was little difference in the top five skills nominated by HCP both pre- and 3-months after training (see Table 2).

Table 2: Most important skills when assessing patients’ psychological and psychosocial needs

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Responses pre-training (n=509)</th>
<th>Responses 3-months after training (n=113)</th>
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<tr>
<td>1</td>
<td>Communication 93%</td>
<td>Listening 97%</td>
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<tr>
<td>2</td>
<td>Patient-centred approach 92%</td>
<td>Communication 91%</td>
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<tr>
<td>3</td>
<td>Listening 92%</td>
<td>Patient-centred approach 90%</td>
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<td>4</td>
<td>Respect 87%</td>
<td>Rapport building 86%</td>
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<td>5</td>
<td>Empathy 84%</td>
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HCP confidence and extent of use of MH assessment tools improves after training

In contrast to generalist skills, survey responses show the training had a positive impact on HCP’s MH skills. The two-day workshops focused on having participants appreciate the impact the mental health ‘treatment gap’ has on the lives of people with advanced chronic and terminal illness, together with understanding the meaning people with advanced chronic and terminal illness ascribe to their symptoms, the psychological issues they face and the impact this has on their quality of life. The training also focused on competencies around delivery of MH interventions that are timely, appropriate and effective, and that address the deeper existential concerns of the patients and that of their family members and loved ones. Over 93% of training participants agreed that the course content, format and delivery were relevant and appropriate (n=451).

With these learning outcomes in mind respondents were asked their opinion around their skills and confidence in addressing their patients’ MH concerns. Before training, 74% of respondents screened their patients for mental health issues or psychological concerns ‘regularly’, ‘most of the time’ or ‘all of the time’ (n=506). This percentage increased to 91% 3-months after training (n=112), suggesting that the training is improving awareness of screening for mental health issues.

HCP were asked to consider their extent of use and confidence using twelve validated MH assessment tools. The most commonly used tools by respondents prior to and 3-months after training are the Mini Mental State Examination (MMSE), Depression Anxiety Stress Scales (DASS), Kessler Psychological Distress Scale (K10), Geriatric Depression Scale (GDS), and Distress Thermometer (DT). The extent of use of these tools has increased from pre-training to 3-months post-training for all except the MMSE, with use increasing, on average, from 32% to 41%. In addition, the level of confidence in using these tools has significantly increased 3-months post-training (p<0.05), from 41% pre-training to 60% on average (see Table 3).
Table 3. Extent of use, and confidence using common MH assessment tools

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<td>61</td>
<td>67</td>
</tr>
<tr>
<td>DASS</td>
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<td>K10</td>
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<td>DT</td>
<td>19</td>
<td>38</td>
<td>29</td>
<td>63</td>
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<tr>
<td>Average</td>
<td>32</td>
<td>41</td>
<td>41</td>
<td>60**</td>
</tr>
</tbody>
</table>

*Respondents who use assessment tool ‘regularly’, ‘most’ and ‘all of the time’

*Respondents who are ‘reasonably’, ‘mostly’ and ‘completely confident’ using assessment tool

** p<0.05 for “% confidence using tool”; pre-training vs 3-months after training

All HCP who were interviewed 6-months after training indicated that the training positively changed aspects of the care they provide (currently n=9), particularly by increasing their awareness of patients’ mental health issues, empowering them to act on these issues either themselves or by referring their patient to the appropriate HCP, and confirming that mental health issues are something that can and should be addressed “in the last 400 days of life”.

**HCP use of therapeutic approaches, and confidence in their use, improves after training**

The two-day workshops focussed on using psychological assessment tools to develop provisional diagnoses and multidisciplinary treatment plans; narrative approaches to assessment; using a strengths and narrative approach in advanced care planning; and using appropriate therapies such as loss, grief and trauma; mindfulness; narrative; dignity; values; and acceptance and commitment therapy.

When asked about their use of MH therapeutic approaches, both the frequency of use and confidence in using these were much lower than for generalist practice skills and increased
after training. HCP were asked to nominate their most commonly used therapeutic approaches (strengths practice, solutions/task-focussed practice, mindfulness, grief and loss, crisis intervention and narrative therapy). These therapeutic approaches were used by less than half (45%) of respondents on average before training, but this increased to 59% 3-months after training (see Table 4). Interestingly, only half of respondents who use these therapeutic approaches were confident using them before training, but HCP confidence using these approaches improved significantly, to 72% on average, 3-months after training (p<0.05) (see Table 4).

These findings are similar for HCP who provide bereavement support and care to families and care givers of their deceased patients; approximately half of respondents provide this type of support, 59% of whom are confident doing so, however this confidence increased to 82% 3-months after training (see Table 4).

Table 4: Extent of use, and confidence using key therapeutic approaches including bereavement care

<table>
<thead>
<tr>
<th>Therapeutic approach</th>
<th>% of respondents who use approach*</th>
<th>% confidence using approach*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-training (n=478)</td>
<td>3 months after training (n=105)</td>
</tr>
<tr>
<td>Strengths</td>
<td>61</td>
<td>75</td>
</tr>
<tr>
<td>Solutions/task-focussed</td>
<td>53</td>
<td>67</td>
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<tr>
<td>Mindfulness</td>
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<td>62</td>
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<tr>
<td>Grief and loss</td>
<td>38</td>
<td>51</td>
</tr>
<tr>
<td>Crisis intervention</td>
<td>37</td>
<td>40</td>
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<tr>
<td>Narrative therapy</td>
<td>32</td>
<td>57</td>
</tr>
<tr>
<td><strong>Average (all 6)</strong></td>
<td><strong>45</strong></td>
<td><strong>59</strong></td>
</tr>
<tr>
<td>Bereavement care</td>
<td>56</td>
<td>64</td>
</tr>
</tbody>
</table>

*Respondents who use approach ‘regularly’, ‘most’ and ‘all of the time’
*Respondents who are ‘reasonably’, ‘mostly’ and ‘completely confident’ using the approach

**p<0.05 for “% confidence using approach”; pre-training vs 3-months after training

**Further training priorities**

Both post-training survey respondents and interviewees have indicated that the training was extremely valuable and have provided feedback such as:

“I would say that the course was comprehensive, it transforms perspectives”

“The content was very relevant”

“The course content was fantastic! It's been an incredible opportunity to interact with other course participants to understand how to be better practitioners”

“Excellent resources came with the training and I think this is worth its weight in gold”

“It was a good balance, drawing from a wide range of content information, theories, statistics, practice wisdom, it was delivered in a friendly and simplified manner”

These responses provide constructive information in terms of the relevance of the content and resources, and the value of delivery via a face-to-face format conducted in the presence of respondents’ colleagues and peers. In addition, the improvements in HCP confidence in using MH assessment tools and therapeutic approaches after training are encouraging, however post-training survey respondents have indicated that further, more targeted training would be beneficial, perhaps in the format of regular refresher workshops, or online training. Specifically, respondents indicated that they would like to undertake further training in grief and loss, counselling, bereavement support, dignity therapy and narrative therapy, in order to provide more effective care. These comments are supported by the responses of participants who were interviewed 6-months post-training.

**Discussion**

Evidence from the literature highlights the existence of a ‘skills gap’ in which HCP who care for chronically or terminally ill patients lack the unique mix of competencies, knowledge, skills and attitudes required to provide holistic palliative and end of life care. Pre-training survey results from the LAR study support the literature in that, on average, less than half of HCP surveyed feel confident using common mental health assessment tools with their chronically
or terminally ill patients. Similarly, only half of HCP surveyed feel confident using key therapeutic approaches with these patients.

This study demonstrates that a two-day professional development workshop focussed around using appropriate mental health assessment tools and key therapeutic approaches for chronically or terminally ill patients and their caregivers, has led to significant changes in the skills and confidence of HCP 3-months post-training. Respondents are more likely to use common mental health assessment tools to screen their patients for mental health issues or psychological concerns after training. In addition, respondents use these tools with significantly greater confidence after training, compared to pre-training. Respondents also use key therapeutic approaches with their patients and families more frequently after training, including bereavement care. They are also significantly more confident using these approaches. Together these findings indicate that the training has improved HCP’s awareness of and response to their patients’ mental health concerns.

Statistically significant changes in confidence 3-months post-training are encouraging, particularly given that the training is ongoing, and the 3-month cohort represents only a small proportion of the total number of respondents we expect to complete the survey. We anticipate a more significant effect after analysis of data from the complete 3-month post-training cohort. We will also obtain data from respondents 6- and 9-months after completion of the training. Future publications will report any longer term improvements in confidence of HCP using common mental health assessment tools and key therapeutic approaches.

The feedback from respondents regarding the relevance of the training content and resources; and the value of face-to-face delivery to a large group, together with requests for additional specific training is extremely valuable. This feedback will inform design and delivery of future, more targeted training to further address the mental health skills and treatment gap in palliative care. Further analysis of key themes from the complete set of post-training survey and interview responses will be undertaken and presented in future papers from informing practice to translation into practice.
The ‘Listen Acknowledge Respond’ professional development workshops for HCP working with terminally ill and palliative patients are bridging the mental health skills and treatment gap in palliative care, as evidenced by increased use and confidence of HCP using common mental health assessment tools and applying key therapeutic approaches.
References


A Consumers’ Experience of Trauma-Informed Care in Acute Mental Health Units in Australia: Phenomenological Investigation.

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Sources of support: Nil declared.

Paper Presented at the
18th International Mental Health Conference
Conference Centre, Sea World, Gold Coast (QLD), 21-23 August 2017
Acknowledgements

I would like to wholeheartedly acknowledge the participants of this study for generously sharing their time and personal journey of the mental health service.
Structured Abstract

Aim: The aim of this study is to explore the lived experience of trauma informed care in acute mental health units as experienced by consumers of the service.

Background: Consumers of mental health services have the highest rates of exposure to social trauma, interpersonal trauma and trauma-related mental health disorders. Equally, they experience high rates of stigmatisation, marginalisation and re-traumatisation when receiving care in mental health units. Trauma-informed care understands that consumers of mental health services have the highest prevalence of trauma and as such recognises that mental health nurses are in a powerful position to identify and respond to trauma. Trauma-informed care supports the foundations of a healthy organisational culture to provide recovery-orientated and consumer-driven mental health care.

Design: The study is a qualitative phenomenological investigation of five consumers in acute mental health care. The study utilised van Manens approach to phenomenological enquiry.

Results: The study found four overarching themes: ‘Not being heard’, ‘Biomedical model Vs holistic mental wellness’, ‘Power and control within the biomedical model’ and ‘Re-traumatising environment’.

Conclusion: The findings have demonstrated that mental health services may further re-traumatise and victimise consumers of mental health services. The study demonstrated that consumers experienced not being heard and as though they were being silenced in acute mental health settings. The current biomedical model in mental health appears to act as a barrier to genuine engagement with consumers. The study has highlighted the urgent need for mental health units to become trauma-aware, trauma sensitive, trauma-responsive and trauma-informed.

Relevance to Clinical Practice: Acute mental health units can traumatising or re-traumatise consumers. Trauma-informed care is a well-suited strength-based recovery orientated approach to mental health care.

Keywords: ‘trauma AND informed AND care’ OR ‘trauma AND informed AND practice’ OR ‘trauma AND informed AND service’ AND ‘acute AND mental AND health AND unit’
OR ‘psychiatric AND unit’ OR ‘psychiatry’ OR ‘acute AND mental AND health AND setting’.
Introduction

Trauma can occur secondary to one single or a number of adverse events; it may be a perceived or actual threat and can impact on ones’ life (Bateman, Henderson, & Kezelman, 2013). Trauma-informed care (TIC) has been described as a model of care that recognises the severity and universality of trauma (Bateman et al., 2013). At the core of TIC is the deep understanding that health and human services serve survivors of trauma and as such, have a responsibility to deliver services that are trauma aware, trauma sensitive, trauma responsive and trauma informed (Mieseler & Myers 2013).

Trauma can touch every facet of ones’ life and can increase the risk of psychological, social, physical and occupational impairment (Fallot & Harris, 2009). Trauma is life-changing and changes ones’ view on the world and in a deeper sense, ones’ view on ones’ self within the world (Fallot & Harris, 2009). Consumers of mental health (MH) services have the highest rates of trauma and MH services can further re-traumatise and victimise consumers (Mauritz, Goossens, Draijer & Achterberg, 2012). A TIC approach would identify, respond to, and decrease the likelihood of re-traumatisation in care (Harris & Fallot, 2001). The approach would support MH professionals to understand the person, as opposed to their symptoms (Harris & Fallot, 2001). As symptoms of mental illness are often a manifestation of the trauma, and represent an adaptive way of coping with trauma (Elliot, Bjelajac, Fallot, Markoff, & Reed, 2005).

There are no universally accepted principles of TIC in literature however, a number of authors and organisations have been instrumental in the development of agreed TIC principles (Harris & Fallot, 2001; Elliot et al., 2005; Harris & Fallot, 2009; Substance Abuse and Mental Health Services Administration (SAMHSA), 2014; National Council for Behavioural Health, 2015; National Association of State Mental Health Program Directors, 2015; Mental Health Coordinating Council (MHCC) as cited in Bateman et al., 2013). TIC requires an explicit understanding of the relationship between trauma, psychopathology and consumer behaviour. This understanding is at the core of all consumer interactions and paves the way for recovery with an emphasis on hope, autonomy and consumer choice. TIC can be argued as a model that sits fluidly within the recovery and person-centred care model yet, is defined by its innate relationship with the pain and suffering of trauma.
Several studies have investigated TIC within an acute MH setting (Ashcraft & Anthony, 2008; Ashmore, 2013; Barton, Johnson, & Price, 2009; Borckardt et al., 2011; Chandler, 2008; Clark et al., 2008; Elliot et al., 2005; Goetz & Taylor-Trujillo, 2012; Isobel, 2015; Lietz, 2014). A number of these studies found that TIC is based on a relational collaboration with the consumer (Elliot et al., 2005; Ashcraft & Anthony, 2008; Ashmore, 2013; Barton et al., 2009; Borckardt et al., 2011; Isobel, 2015; Lietz, 2014). That is, the therapeutic relationship is central to the consumers’ recovery journey and decreases re-traumatisation and further victimisation in care. One TIC study (n=2729) found that the single most important predictor of a consumers’ satisfaction of a service, was their therapeutic relations with MH staff members (Clark et al., 2008). Fostering choice and control within the therapeutic relationship are similarly emphasised as an important TIC approach in a consumers’ recovery journey (Ashmore, 2013; Barton et al., 2009; Chandler, 2008; Elliot et al., 2005; Goetz & Taylor-Trujillo, 2012; Isobel, 2015; Lietz, 2014).

Symptoms of trauma for instance non-suicidal self-injury, are often viewed as pathological through the lens of the biomedical model. This is as opposed to viewing non-suicidal self-injury as an adaptive coping strategy secondary to the traumatic event(s) (Elliot et al., 2005). In turn, MH staff working within the biomedical model may fail to validate resilience in the consumer, leading to a lack of control of their recovery journey (Elliot et al., 2005). Several TIC studies within MH units demonstrate the importance of strengthening the consumers’ personal responsibility through empowering their choice as opposed to control over their recovery journey (Goetz & Taylor-Trujillo, 2012; Elliot et al., 2005; Lietz, 2014).

As literature in TIC has demonstrated, MH units are traditionally restrictive environments, removing control from the consumer in their recovery journey (Ashmore, 2013; Barton et al., 2009; Chandler, 2008; Isobel, 2015; Borckardt et al., 2011). Seclusion and restraint is an example of a restrictive and common practice in MH units. Seclusion is the ‘involuntary confinement of a patient in a room from where they are physically prevented from leaving’ and restraint is defined as ‘a manual or mechanical device to restrict a person’s physical ability to move’ (Azeem et al., 2011, p. 2). Seclusion and restraint has been linked to trauma and re-traumatisation in care (Frueh et al., 2005).

An earlier systematic search of the literature (Wilson, Hurley, Hutchinson, 2017) revealed that four studies in total investigated TIC from a consumers’ perspective (Borckardt et al., 2011; Lietz, 2014; Clark et al., 2008; Isobel, 2015). Only two of the four studies were
Australian, and one investigated MH unit rules from a TIC consumers’ perspective (Isobel, 2015). Additionally, only one of the four studies investigated the consumers’ \( (n=1) \) lived experience of recovery from a TIC perspective (Lietz, 2014). None of the abovementioned studies investigated the lived experience of TIC from an Aboriginal Australian perspective. To date, no studies have examined the level of commitment Australian MH services have to TIC. Furthermore, there is no literature examining the robustness of TIC education for MH staff or if this influences culture within MH units.

If Australian MH services are committed to the betterment of MH service provision through evidenced based, client-centred MH care, TIC requires contextualisation within Australia. Research is required that examines what, or if at all, Australian MH services are trauma-informed and trauma-responsive. Further research is required to understand the consumers’ lived experiences of re-victimisation and vicarious traumatisation in Australian MH services. There is also a need for research to focus on the strength and resilience of trauma survivors to better understand how to support their needs.

The aim of this study is to understand the lived experience of mental health services from a consumers’ perspective through the lens of trauma-informed care and practice. To gain a deeper understanding of what the experiences of care are in acute Australian mental health services and to what extent these experiences are trauma-informed or trauma-denied.

**Method**

*Ethics:*
This study was considered by the Chair of the Human Research Ethics Committee Southern Cross University, Professor Bill Boyd, and found to be of merit, low risk and meeting the Statement principles.

*Study design:*
Qualitative phenomenological study utilising van Manens (1990) approach. The research approach in this study entailed a hermeneutic and alethic hermeneutic circle (Dowling, 2007). That is, an examination of the experience of the research phenomenon and the role of the researcher in that process (Dowling, 2007). The study design utilised van Manen (1990)
approach to phenomenological reduction as a structure for phenomenological reflection (Dowling, 2007). Utilising this existential framework, assisted the researchers to transform meaning from experiences (Dowling, 2007).

**Participant selection:**
Participants in this study were over the age of 18 years of age, not currently receiving treatment under the Mental Health Act (2007), identified as being a consumer of mental health services in recovery and had a history of an acute inpatient mental health admission. It was not suitable to explore the nature of the inpatient admission in mental health with a consumer that was actively being treated for their mental illness against their own will. The Declaration of Helsinki (2008 as cited in Helmchen, 2011, p. 442) outlines research that includes consumers that lack the capacity to consent should only be pursued if it is a ‘necessary characteristic of the research population’. Consumers’ that lacked the capacity to consent was not a necessary characteristic of this population. It was essential that participants were over the age of 18 years as this did not meet the study aims, which are investigating the adult experience. It was important that consumers in this study had a history of contact with an acute mental health service as this contextualised the episode and focus of care.

Participants were recruited through convenience and purposive sampling through a local non-government organisation. The passive recruitment strategies that were utilised in this project entailed mail-outs, cards, advertisements at key locations, face to face discussions and through local media networks. Participants who expressed interest were then screened for suitability through the information sheet advertisement and in the first telephone contact made.

Seven participants’ in total (three females, two males) responded to the recruitment process. Two of these potential participants did not partake in the study as one was lost to contact and the second participant did not meet the selection criteria for the study.

**Participant numbers**
Five participants completed the interviews. Four participants preferred that the interviews occurred in their homes; one participant requested the interviews occur at a local sit down area. One participant requested a carer to be present during the interview. It is ethically sound
to allow the carer to be present during the interview as this is in line with the National Mental Health Policy 2008 (Commonwealth of Australia, 2009).

Data collection:
Narrative data was collected through semi-structure in-depth qualitative interviews. There were 24 open-ended prompts developed to guide the interviews based on the Mental Health Co-ordinating Councils Eight Foundational Principles of Trauma-Informed Care (see table 1.) (Bateman et al., 2013).

Table 1.

Trauma-informed Care Principles

<table>
<thead>
<tr>
<th>Citations</th>
<th>Principles of Trauma-Informed Care</th>
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</table>
| Six Principles of Trauma Informed Care (Elliot et al., 2005; Harris & Fallot, 2001 as cited in SAMHSA, 2014). | 1. Safety  
2. Trustworthiness and transparency  
3. Peer support  
4. Collaboration and mutuality  
5. Empowerment, voice and choice  
6. Cultural and historical  
2. Safety  
3. Cultural competence  
4. Consumer control, choice and autonomy  
5. Sharing power and governance  
6. Integrating care  
7. Healing happens in relationships  
8. Recovery |
2. Identify Recovery from Trauma as a Primary Goal |
3. Employ an Empowerment Model
4. Strive to Maximize a Woman’s Choices and Control Over Her Recovery
5. Relational Collaboration
8. Minimize the Possibilities of Re-traumatisation.
9. Strive to Be Culturally Competent and to Understand Each Woman in the Context of Her Life Experiences and Cultural Background.
10. Solicit Consumer Input and Involve Consumers in Designing and Evaluating Services.

| Harris and Fallot (2001) | Additional questions were explored with the participants in the responses to the initial questions. The interviews were recorded with an audio-recorder and transcribed verbatim. Interviews ranged from 40-90 minutes in duration. Following each interview, reflective field notes were kept by the researcher as a reflexivity strategy (van Manen, 1990). It is important to note the researcher is a mental health nurse with experience in counselling and talk-based therapies.

**Data analysis**

Data analysis followed van Manen’s (1990) phenomenological approach to thematic analysis. The essence of this approach is to explore the fundamental structures of how humans experience the world. To achieve this, every sentence was explored for meaning and notes were taken that reflected the fundamental essence of the consumers’ experience. |
To ensure the emergent themes reflected the fundamental essence of the consumers’ experience, van Manens (1990) four lifeworld existentials were used as a compass. During the process of analysis, excerpted narrative text was coded to the four lifeworld existentials, with the coding refined and condensed as the themes emerged. That is, all themes were reflected against the lived space, lived body, lived time and lived relation. As the coding emerged, the themes were re-visited a final time in order to ensure they were essential and did not include incidental themes (van Manen, 1990). Revisiting the themes in this way is a strategy to aid in the collection of unbiased data (van Manen, 1990).

Results:

The study found four overarching themes: ‘Not being heard’, ‘Biomedical model Vs holistic mental wellness’, ‘Power and control’ and ‘Re-traumatising environment’. Each of these themes is described in the following sections.

Not Being Heard.

Nearly all participants spoke of experiences of having their voice dismissed, ignored and disregarded. Most also spoke of having their needs entirely dismissed, or receiving responses to their needs that were unhelpful. Three of the participants spoke of experiencing re-traumatisation as a result of not being heard by MH staff. One participant recounted building up the courage to finally seek help and presented to the MH unit acutely suicidal, only to be turned away. For this consumer, this experience reinforced negative core beliefs that no one cared:

One participant described being turned away from the acute MH unit from MH staff acutely suicidal. This consumer described building up the courage to finally seek MH help, presenting to the MH unit doors unambiguously imminently suicidal, to be told by MH staff through an intercom system to make their way to the emergency department.

“I don’t know if I was going to jump in front of a truck and went and pushed the buzzer of the MH unit and said “I wasn’t feeling too well”. They told me to go to the front Emergency…. this was after I think I’d walked up and down the highway for eight or nine hours…. ” [Carer clarifies] “Isn’t this when you pressed the button and clearly had the means to kill yourself? ... “Yes” [participant] “And then to be turned to emergency. I mean it’s a bit... I was dumbfounded. I was like, didn’t expect someone to come and roll the carpet out for me. But I thought they’d be a bit different to that”. (Participant B)
Recounting a similar experience, two other participants described reporting a physical health problem and being ignored:

“I mentioned it to the nurse (that a fishbone was stuck in my throat) and she said, “oh mate, it’s just irritating your throat, you’ll be alright” .... I said “no, there is something wrong, I’m telling you” .... Day three, I was booked in for an operation” [to remove the fishbone]. (Interview C)

“I’m not $%&ing here for drugs. If I wanted drugs I could go out there and get it…. the dude at MRI said give him what he needs [pain medication] ... [I can see that] his disc has blown out”. (Interview B)

One participant described being constantly interrupted by his treating psychiatrist. The participant viewed this psychiatrist as genuinely disregarding his MH needs and lacking basic communication skills.

“I was asked a question and started to answer them and I’d be cut off with another question. This was the way he [psychiatrist] was with everybody, and even the other nurses didn’t like him”. He would ask you a question and then – ‘so doctor, why don’t you listen to my questions?’ … ‘I don’t need to listen to all your answers…. I can tell by looking at you what is wrong’ [psychiatrist]. (Interview A)

Two participants described their treating psychiatrist as never being present either physically and therapeutically. For these consumers being heard meant the difference between feeling as though their MH recovery was on track or feeling as though the admission was pointless.

“The psychiatrists hardly spent any time on the ward at all. They would come in and sometimes they would just sit down for perhaps a minute or even two minutes, and then would leave... “... If I had seen the psychiatrist more frequently I think I might have felt like I was being cared for more proactively... ” (Interview A)

“... We used to call them [psychiatrists], they were like ghosts. They’d hardly ever – we’d hardly ever see them, and when we did it was generally a very very brief consultation. I don’t know how- if that’s the way it works in other units but in this one it was very rare to see a psychiatrist. You’d go for days, weeks, without seeing a psychiatrist. I think I went two weeks once without seeing one.” (Interview A)

[Psychiatrist said] .... you are just over-reacting. To the assault, I over reacted.... “How did that make you feel [interviewer]?” .... I guess like I’ve always felt, that nobody cares, unimportant”. “[I felt like I was] Never heard I think. Never heard. Never listened to, and
that’s really important to me, to be heard…. Then I get that sort of treatment off professionals”. (Interview C)

Other participants reported that not being heard led to being restrained. The following two narratives illustrate that not being heard was associated with coercive measures and re-traumatisation that could have been otherwise avoided:

“Can you describe any other measures the staff could have done to avoid you being restrained?” (Interviewer)

“Yeah, listened to what I was saying…. Understand where I was coming from instead of just grabbing me and restraining me, calming me down. You know. Get someone to talk to you in a nice calm manner rather than reacting to what I was saying”. (Interview C)

“Talking and listening... It may not make sense, but just to be heard can make a huge difference to someone” .... “MH staff don’t need to understand your story, simply listen to you”. (Interview E)

Biomedical Model Vs Holistic Mental Wellness

The biomedical model dominance, reflected in a reductionist view of mental wellness within the paradigm of psychopathology, evident in most of the themes. Speaking of the influence of the paradigm upon their care, participants expressed a lack of attention to their wider, social, emotional, psychological and spiritual needs, and a strong focus on their ‘pathology’ and organisational processes.

The lack of strengths-based conversations and the inherent ‘sick role’ attitude of some nurses was recalled:

“There were some nurses that took the attitude that you were very sick – they were condescending – ‘You’re a very sick person you know’ [nurse would say] .... They were in the minority, the condescending ones that treated you [like that] – they spoke down to you and some of them clearly enjoyed what they were doing”. (Interview A)

Another participant highlighted how the organisational processes for admission to the MH unit lacked true engagement. The admission process for this participant was experienced as mechanistic and highly disempowering:
“When I arrived they took me into an office and gave me a big questionnaire about what I expected from the visit at the hospital…. I found the staff member was very busy, very abrupt, just asking questions wanting answers; “well, why can’t you answer that?” [She said] … It made me feel really stupid and like an idiot. That’s how I felt when I was sitting [there], and really confused … Mental health patients don’t [understand]…Why can’t someone come in and sit and have a nice quiet chat with them and say “do you understand what your rights are, do you understand what your responsibilities are?” …. Your responsibilities to staff, how you’ve got to respect them…. If you feel that your rights are not being respected .....” (Interview C)

Two participants described a lack of genuine therapeutic engagement with nursing staff outside of traditional nursing duties. Poor engagement for these consumers led to boredom within the MH unit:

“There was always someone watching [the garden] the nurses avoided going in there most – a lot of the time…unless they sort of had to”. (Interview A)

“The only source of stimulus was the television”. (Interview E)

Another participant described how his nutritional and exercise needs were not cared for. Both of which he meant a lot to his mental health:

“A lot of people who are there eat really badly…. If you can give them good food and just even get them moving, even just walking around a bit, as we know now”. “... We weren’t allowed to do a lot of exercise. There were no real facilities for doing (exercise)… In terms of recovery, all that the unit really was people in acute conditions treated with medications until the staff thought they were sufficiently recovered, so they could leave”. (Interview A)

Power and Control within the Biomedical Model

All participants described feeling powerless and lacking control of their recovery journey. Most consumers experienced re-traumatisation and further victimisation in the acute MH unit. All participants described the relationship dynamic between MH staff and the consumer as one based on power and control. For many of the participants, there was no self-determination as their rights were not upheld, further reinforcing a negative self-perception. For one participant, the use of power and control by MH staff mimicked past sexual assault trauma and directly contributed to re-traumatisation for this consumer.

Two participants spoke about how MH professionals used restraint as a form of control. One was silenced by the threat of being restrained after seeking further information on a
prescribed medication. The other participant was silenced by the threat of restraint for voicing his (sic) rights:

“I don’t think a lot of mental health patients do and I don’t think their rights are respected enough for them to be able to stand up and say, well hang on, that is my right... or we’ll restrain you because you’re demanding your rights. That happens too much I think” (Interview C)

“... She [psychiatrist] would say – ‘you do not take your Seroquel, I will hold you down and inject you’. It was like, whoa, I had not even said for a second I’m not going to take my Seroquel, but that was the way she acted ... [restrained] I couldn’t move. Well I was obviously at their mercy. I didn’t feel- it wasn’t a pleasant situation to be in and I didn’t know what was going to come next”. (Interview A)

Speaking further about the experience of restraint, one participant reported that being restrained mimicked the psychological, physical and emotional trauma suffered as a teenager from a multiple perpetrator sexual assault:

“Next thing, the buzzer would go and there would be three blokes taking me away... For me it was horrendous. The thing was [there were] three men, I’d been gang-raped by three men when I was 15”. “It [restraint] was horrifying. I had all these images going through my mind .... They were filling me full of drugs, what was happening once I was full of drugs. Like when I came out after passing out from drugs ... it was, what have they done to me while I’ve been out? Then the restraints would still be on and it’s like I just panicked”. (Interview C)

Participants described being scared on waking from the rapid tranquillisation. For one participant this fear was reminiscent of a sexual abuse trauma, for the other consumer, it was the fear of not being in control any more.

“I did not know what had happened in that [seclusion] room. I did not know who had been in there”. (Interview E)

“.... yeah, totally blacked out for a period of time. So then I’m worried about what they’ve done to me while I’m blacked out....”. (Interview C)

A number of participants described not having any control of their recovery journey in the acute MH unit. These participants likened nursing staff to jail wardens maintaining order and control:

“... you had to get your cigarettes off the nurses and depending on who the nurses were, they would use – use the cigarettes as a way to maintain order within the high dependency unit”. (Interview A)
“Because one things for sure, when you’re unwell and you’re vulnerable the power imbalance in hospital, the amount of power that the nurses and the staff have over you, is really scary because you can’t run, you can’t defend yourself. There’s nowhere to go. You know you’re locked in”. (Interview D)

“I’d only known the old system, which they could do whatever they liked to you in the old system. So what I saw in the new system was still the same, they could do whatever they liked to me. It didn’t matter whether I was voluntary or not, whether it’s private or &%$#ing public. They had every right to take control of me and I could say nothing about it.... Most people when they go into mental health units have no power. They’ve lost it. They know they’ve lost it. They’ve lost it before they get there, that’s why they’re there”. (Interview C)

Seclusion was described a dehumanising and re-traumatising punishment by one participant. This participant described being taken to the seclusion room at a time he (sic) most needed human interaction; and being made to feel like an animal left alone in the cold:

“It seemed to be I was secluded when I most wanted company. It was almost as though it was a punishment. I needed to use the bathroom and I had to – I literally banged, banged, banged the door [of the seclusion room] for I don’t know how long. In the end nobody came, so I had to do my business on the floor and cover it up with the only one blanket I had”. (Interview D)

“Could you smell your faeces?” (Interviewer)

“Yes”. (Interview D)

“How did that make you feel?” (Interviewer)

“Like an animal”. (Interview D)

“What was the temperature like?” (Interviewer)

“Cold. I was freezing. I was freezing and after I went, like after I did my business, even more so.... but then I couldn't use the blanket because I had to use the blanket for you know” [to cover the faeces] (Interview D)

The same participant described not knowing what led to seclusion, and to this date, he remains confused about the event recalling “No, no. It [seclusion] still hasn’t been explained to me really. I’m just trying to still make sense of it myself...” (Interview D)
Theme Four: Re-traumatising Environment

All of the participants described the MH unit environment as lacking a recovery focus. A number of participants shared the view that the MH environment significantly influenced the way they felt and how they perceived the care they were receiving. Nearly all participants described the MH unit as a jail, innately linking the MH unit environment to a jail sentence, a punishment.

“It felt – it feels like you’re in jail... like you’ve done something wrong, and that’s why I kept saying to them ‘what have I done wrong’... If you’re feeling a bit restless and it’s late at night you can’t just go and have a coffee or cigarette. You’re in jail”. (Interview D)

“It was like a prison cell [carer]...” ... “As soon as you were in there, it took my focus off what was really going on in my mind and focus on being right to get the #$%^ out of there”. (Interview B)

“It felt like prison rooms, prison cells.... The look, the feel. The graffiti – in the High Dependency Unit on the walls of the cells there was graffiti done by previous patients... clearly people were deeply, deeply disturbed. They didn’t even bother to remove it.... In the unit I didn’t really know I was recovering. I thought I was in prison...” (Interview A)

“Very plain, very small, one bed. You didn't know if you were in jail?” (Interview E)

Two participants described the uncleanliness of the MH unit as making them feel worse. One participant could not eat in the unit:

“Well, that made me feel worst because the unit itself was like corridors with rooms in it. It wasn’t very clean, it wasn’t very updated... The carpet looked dirty but it was old I think it was marked and stained from years and years of worth... and the wall themselves were off creamy colour but they were all marked. Like I said, paint was chipped off and stuff like that”. (Interview C)

“It should be more colourful [carer]”. “Not such a depressing place I reckon. It should be a bit more, I don’t know, colour on the walls.... It’s not a #$%^ing motel, I understand that. But the food, I’m like just ... I didn’t eat there did I? I just had cups of tea”. (Interview B)

Two participants found the MH unit environment traumatising. The electro-convulsive therapy suite was a particularly disturbing visualisation for these consumers.

“... Here’s a guy laying on a trolley dribbling... She [nurse] said ‘that’s where they do ECT’... I went ‘no... no... no... no.... I said I can’t #$%^ing be here’.... What I hadn’t realised, I’d been threatened as a child that they were going to do that to me.... Any time I
misbehaved, guess what room they’d put me in? Straight across from [the ECT room]”. (Interview C)

“I remember going into what I think was the acute... That space was really really traumatic because when I first walked in, to my right was a young man, a young boy... hooked up to some machinery and he really looked in a really bad way”. (Interview D)

One Aboriginal participant described how the environment lacked cultural sensitivity

“Horrible [MH unit]. They really need to soften the place. Well for me, for starters, being Koori, an Aboriginal – most mainstream buildings, government buildings, they’re colourless, they’re dry, they’re cold, they’re hard. Nothing safe or comfortable or relaxing about the environment at all, at all. If you’re becoming unwell and you need to go, and ideally I’d just go bush and just lay under a tree and rest and wait for kin to come and help you become well”. (Interview D)

Discussion:

The findings of this research are consistent with literature in this field and demonstrate that acute MH units can be traumatising and re-traumatising for consumers of mental health services (Ashmore, 2013; Barton et al., 2009). The findings highlight that staff relationships with consumers can further reinforce the power-over dynamics of consumer’s past violent or abusive relationships (Chandler, 2008; Isobel, 2015; Borckardt et al., 2011). MH services can further re-traumatise consumers, a TIC model aims to respond and decrease the likelihood of re-traumatisation occurring (Harris & Fallot, 2001; Mauritz et al., 2012). TIC is based on a relational collaboration with the consumer (Elliot et al., 2005). The therapeutic relationship is central to the consumers’ recovery journey, and is one of the most important predictors of consumer satisfaction of MH care (Clark et al., 2008). In contrast, this study highlights limited functionality, coupled with a lack of consumer preferences in acute MH care sustains a focus of upon acute symptom treatment, as opposed to recovery-orientation.

The themes reported here powerfully situate TIC within van Manens’ (1990) life existentials of lived relations and also of lived space. The experience of interpersonal space or lived relationality was highlighted throughout this study as all of the participants in this study had experiences of being ignored, silenced and disregarded during their acute MH admission (van Manen, 1990). For one consumer, being ignored by MH staff almost culminated in suicide. This experience powerfully highlights the significance of consumers’
experiences being disregarded, as the therapeutic relationship is the very pivot upon which services are delivered from and it is absent where re-traumatisation occurs.

None of the participants in this study felt as though they were in control of their recovery journey. Consumers recounted that the relationship between MH staff and the consumer was based on power and control. The lived space, spatiality of the acute MH unit was reflected upon by participants and likened to a jail (van Manen, 1990). Nursing staff were likened to jail wardens, who served the purpose of maintaining order and control. Revealing their ‘lived body’ as jail wardens was evidenced by MH utilising cigarettes to maintain power and control and enforcing medication by threats of utilising intramuscular injections (van Manen, 1990). Participants described seclusion as a further method used to maintain order and control in the MH unit. Nearly all participants in this study were re-traumatised by restraint, enforced medication or seclusion. Chemical, manual or mechanical restraint was often used as a powerful form of control to silence the consumers in this study. One consumer repeatedly relived her history of sexual assault during several episodes of physical and mechanical restraint in the MH unit. The findings of this study echo those of an Australian focus-group study of 36 consumers which found that seclusion and restraint were used with excessive force and that in using seclusion and restraint, staff demonstrated a lack of empathy and poor therapeutic alliances, expressed paternalistic views on MH care and offered a lack of alternative interventions to consumers (Brophy, Roper, Hamilton, Telles, & McSherry, 2016).

Several TIC studies have identified a number of strategies to decrease the use of seclusion and restraint in acute MH units (Ashcraft & Anthony, 2008; Barton et al., 2009; Borckardt et al., 2011; Goetz & Taylor-Trujillo, 2012). These strategies entail: strong organisational change processes, debriefing, training in trauma, training in discourse, environmental changes, consumer collaboration in treatment planning, peer worker involvement and sensory modulation (Ashcraft & Anthony, 2008; Barton et al., 2009; Borckardt et al., 2011; Goetz & Taylor-Trujillo, 2012). A study by Hammer, Springer, Beck, Menditto and Coleman (2011) found that 50% of consumers (n = 622) who had been restrained and secluded had experienced a form of childhood physical and or sexual abuse (p < .001). There is no comparative data on seclusion rates for Aboriginal people in Australians (Happell & Koehn, 2010). However, rates of abuse in Aboriginal populations that are secluded can be estimated to be significantly higher, as substantiated childhood abuse in this
population is nearly six times more than the general population (NSW Ombudsman, 2012 as cited in Bateman et al., 2013). This is notwithstanding the significant role of intergenerational or historical trauma seen in this population (Heffernan, Andersen, Davidson & Kinner, 2015).

To be trauma-informed, is to understand and respond to the past and present critical issues which would likely be a negative and destructive influence on the MH management of Indigenous consumers. In this study, one Aboriginal participant experienced trauma secondary to the seclusion episode. This consumer described an account that made her (sic) feel like an animal by being forced to defecate on the floor. The same consumer described how being taken to a room alone, with no colour or pictures, that was empty and cold was a juxtaposition to what she (sic) knew as her medicine, which was her land, her kin, as she described as the most important aspect to her recovery. van Manen (1990) states, the lived space is an existential ground that humans use to make sense of and experience the world. To be secluded was not only isolating her from human interaction, it was isolating her from the only source of wellness she knew. The participant described that there was no cultural sensitivity in the MH unit. If the unit would have been more culturally sensitive this would have decreased her emotional, psychological, spiritual and physical distress.

To be trauma-informed requires MH staff to understand how culture influences the way in which individuals interpret and respond to their own trauma (SAMHSA, 2014). It is imperative that MH staff are culturally competent in order to understand the consumers’ unique beliefs, attitudes, spirituality and behaviours that may impact on their treatment and recovery journey (SAMHSA, 2014). TIC literature draws on the empowerment model which utilises the interpersonal relationship to build on the consumers’ resilience in their recovery journey (Elliot et al., 2005). In the empowerment model, the relationship between the consumer and the MH professional is based on mutuality and both parties are valued for the knowledge they share with one another (Elliot et al., 2005).

This holistic model of mental wellness is based on a philosophy which recognises the interdependence of the mind, body and spirit (Zamanzadeh, Jasemi, Valizadeh, Keogh & Taleghani, 2015). None of the consumers in this study viewed the care in the MH unit as holistic. Consumers disliked the institutionalised biomedical model, which they viewed as mechanistic in nature. Lack of engagement with their treating psychiatrist significantly impacted on their perception of MH care. They expressed that one of the main focuses in the
MH unit was medication management as opposed to instilling hope, growth and resilience through strength based engagement. There was a strong desire for consumers to take control of their recovery through holistic interventions i.e. exercise and nutrition. However, the biomedical model dominance led to an over-reliance on psychotropic medication management as first and often only line treatment.

The findings of this study are likened to the Living Well Report (New South Wales (NSW) Mental Health Commission, 2014) which revealed that acute inpatient MH care for consumers decreases their functional capacity, increases stigmatisation, leads to lost hope and increases isolation from supports. Following years of MH reform there is demonstrated limited value of the biomedical model in acute MH units. The Living Well report (NSW Mental Health Commission, 2014) indicated that 54% of the total budget for NSW MH is spent in acute MH units. However, nearly one quarter of consumers leave acute MH units with no significant change in their MH wellness; for nearly 5% their condition worsens (NSW Mental Health Commission, 2014).

Barton et al. (2009) and Borckhardt et al. (2011) demonstrated that TIC educational interventions provided to MH staff supports their therapeutic relating with consumers, challenges paternalistic views and decreases the risk of re-traumatisation, with reductions in the rates of seclusion and restraint. However, training MH staff in TIC would require a critical examination of the environment in which they work. MH nurses in particular, are not only exposed to the traumatic experiences of consumers, they are one of the highest occupational nursing groups exposed to physical and verbal aggression (Baby, Glue & Carlyle, 2014; Jacobowitz, 2013; MaGuire & Ryan, 2007; Ward, 2013). A study by Itzhaki et al. (2015) of 118 MH nurses found that more than half (58.4%) of the respondents had been physically assaulted in the past year and 88.1% verbally abused. The short and long term consequences of physical and verbal aggression lead to compassion fatigue, vicarious trauma and burnout syndrome (Itzhaki et al., 2015). Consequently, MH nurses experience their own inherent organisational trauma. A descriptive study by Zerach and Shalev (2015) of 196 community and MH nurses found that there were high levels of Post-Traumatic Stress Disorder (PTSD) and secondary traumatisation in MH nurses.

If organisations have an expectation that MH nurses are to deliver compassionate care that is trauma-informed, the environment in which they deliver such care requires a critical
examination. TIC educational interventions will arguably fail due to diminished therapeutic relating, if those delivering the care are indeed also in need of such care.

However, MHNs can also respond positively to the inherent challenges of their professional roles. Itzhaki et al. (2015) found a relationship with aggression and resilience in MH nurses. In Itzhaki et al. (2015) study, resilience following an aggressive incident led to positive life satisfaction among MH nurses. Higher resilience scores in Matos, Neushotz, Griffin and Fitzpatrick (2010) study led to increased employee satisfaction and professional confidence. However, literature has not yet examined whether resilience in MH nurses assists them to deliver compassionate, trauma-informed care towards consumers or rather, if resilience is an avoidance strategy that supports an environmental culture of power and control (Itzhaki et al., 2015). The acute MH unit culture, as described by consumers in this study, was based on power and control and may be a way in which the MH nurses protected their emotional and psychological wellbeing following an aggressive incident.

Conclusion:
In conclusion, this study has highlighted the obvious need for a trauma-aware, trauma sensitive, trauma-responsive and a trauma-informed approach in MH units. In light of this study being a small scaled qualitative study, the findings have demonstrated that acute MH services may traumatis, re-traumatisate and victimise consumers of MH services. There is an absolute necessity for MH staff to acquire trauma-specific knowledge in order to prevent trauma and re-traumatisation in care. The Fifth National Mental Health Plan (Draft) states that MH professionals are to be trained in recovery-orientated and TIC (Commonwealth of Australia, 2017). However, implementation of TIC educational interventions would require a critical examination into the acute MH unit culture, environment and social processes that challenge the therapeutic milieu that of which is at the core of TIC. Furthermore, there is a lack of literature examining the robustness of TIC educational interventions in acute MH settings on TIC outcomes.

Consumers deserve to be engaged compassionately in a person-centered environment where they are understood for their personal journey as opposed to a symptom of their mental illness. It is imperative for MH staff to value the unique voice of the consumer as their own experts in their recovery journey. MH staff should therefore build on the strengths and resilience of the consumer in order to improve their quality of MH care (Lietz, 2014). This study has demonstrated that, some consumers may feel that they are not being heard and are
in fact, being silenced in acute MH settings. The current biomedical model in MH appeared to act as a barrier to genuine engagement as it fails to create an environment that is supportive and therapeutic for the consumers in this study. TIC however, would reduce the current limitations of the biomedical model and enhance the capacity of MH services to respond holistically. It is the right of every consumer to be given authentic MH care that does not lead them backwards in their recovery by reinforcing the past traumatic events in their lives.

Consumers of MH services deserve not only respect but a right to voice their own individual needs. TIC focuses on a person-centered recovery model in a way in which empowers and strengthens the needs of the consumer. Furthermore, it gives way to reducing the current shortfalls which are found in the present biomedical model which does little to inspire and connect the consumer to treatment that is safe, compassionate and individualised. TIC is a promising, new and innovating dimension in an effective and individualised approach to MH treatment and care. There is a need for further research in TIC in acute MH settings with a particular need for this research to focus on the consumers’ perspective of care.

**Limitations**

This was a small qualitative study exploring the experiences of consumers at one site. The study did not explore the experience of secondary traumatic stress or vicarious trauma from the perspective of mental health nurses/staff thus, failing to examine the true nature of trauma-informed care in acute mental health units. The study did not explore the role of resilience, employee engagement or clinical supervision for mental health nurses/staff on trauma-informed care outcomes in the acute MH environment.

The study did not specifically seek the experiences of acute MH care from the perspective of consumers with a high risk of trauma i.e. consumers from culturally and linguistically diverse backgrounds (CALD), lesbian gay bisexual transgender intersex queer (LGBTIQ), women with disabilities or Aboriginal and Torres Strait Islander children. The study also did not specifically explore the experiences of consumers who have suffered traumatic experiences (i.e. consumers with PTSD, a history of domestic violence or sexual assault victims etc.) therefore, potentially under-reporting the impact of re-traumatisation in care.
Relevance to clinical practice

Acute mental health units may traumatise or re-traumatise consumers. Trauma-informed care is a well-suited strength-based recovery orientated approach to mental health care in the acute clinical environment. The current emphasis on the biomedical model in acute MH units, as opposed to a trauma-informed recovery orientated model, leads to dissatisfaction with services, traumatisation, re-traumatisation and victimisation in care for some consumers. The study has highlighted that the therapeutic relationship is the strongest most powerful mediator of trauma within an acute MH unit, and becomes a strong predictor of a consumers’ satisfaction of service provision.
Reference list:


How to Work with Difficult Behaviours: Applying The Enneagram Theory at Work

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Paper Presented at the
18th International Mental Health Conference
Conference Centre, Sea World, Gold Coast (QLD), 21 – 23 August 2017
How to Work with Difficult Behaviours: Applying The Enneagram Theory at Work

ABSTRACT: How to work with difficult behaviours is a topic that many people are concerned about in the workplace. Applying Enneagram Theory in the workplace helps people develop their self-awareness and self-understanding. It is also a tool to help facilitate and appreciate relationships at work, to understand others, and to reduce conflict in order to improve cooperation in the work environment.

The Enneagram workshops were provided to professional staff at RMIT International University Vietnam from May to September 2016. Participants were able explore their Enneagram personality types, their personal direction and negative emotions in time of stress, as well as identify their blind spots with their inner observers. Staff became closer in terms of trust, sanctuary and compassion by understanding the two concepts of “be kind, for everyone you meet is fighting a difficult battle” and “there are no difficult people, only difficult behaviours of people”. This understanding resulted in a more positive working environment, a higher level of focus on problem solving and stress management, as well as improved support and productivity.

Keywords: difficult behaviour, Enneagram, self-awareness, employee support/assistance program

Introduction

In a university environment professional staff work with a range of people from diverse cultural and experiential backgrounds’, which can result in differing expectations. As a result, staff experience difficult and challenging situations in the work place, which can have negative psychological impacts.

Enneagram Theory (ET) provides a good foundation for understanding interactions in the work place. ET posits that human nature is made up of nine personality types (detailed below), none of which are better or worse than another, yet are recognizably and radically different in their way of responding to the world (Webb, 2013, p.22). “Understanding each of the nine patterns is a basic proposition, or belief, about what we need in life for survival and satisfaction (Daniels & Price, 2009, p.1).

Enneagram Theory “allows us to look deeply within our own character and to clarify relationship with clients, co-worker, family and friends (Palmer, 1995, p.2)”; allows “for self-unserstanding and for understanding other (Riso & Hudson, 2000, p.6)”; and “develop a deeper understanding of other and learn alternatives to our own patterns of behavior (Baren & Wagele, 1994, p.2)”; “helps us understanding the limiting personality “box” each of us is in so that we can get out of it (O'Hanrahan, 2016, p.11).
METHODS

Enneagram Theory was applied at RMIT University Vietnam to answer the following questions:

1. What does ‘difficult people’ mean to staff?
2. How do we identify them?
3. How can we help staff overcome psychological difficulties and motivate them to improve the quality of their work?

The author used qualitative methods to analyze themes in discourse from three focus groups (that each met on two occasions) and 15 individual interviews over a period of three months from May to September 2016. Three different work groups comprised the three focus groups (Registrar’s Office, School of Communication and Management, Student Life). All discussions were conducted in Vietnamese.

Each participant also completed the Rio-Hudson Quick Enneagram Sorting Test (Riso & Hudson, 1999, p.10-18) and was introduced to Enneagram theory and the system of nine personality types.

RESULTS

Qualitative:

Three themes emerged from the discourse:

1. Participants had diverse and different experiences of working with difficult behaviors,
2. Most participants had experienced negative emotional consequences as a result of dealing with difficult behaviors, and
3. Most participants experience enhanced self-awareness, empathy, motivation and cooperation as a result of this study.

1. Diverse and different experiences of working with difficult behaviours
Most participants reported difficulty working with people who are negative and have a negative outlook on others – these were defined as "harsh people".
Participants also reported experiencing frustrations working with people who complain about others – these were defined as “complainers”.

Participants also described a great deal of stress and pressure working with those who do not like their job due to shirking responsibility and adding to other’s responsibilities – these were defined as "job-seekers".

Participants also found it very difficult to work with people who focused only on themselves and who were only “interested in appearances” and who were not interested in other people or the organization.

Unsurprisingly, some reported discomfort working with aggressive managers – defined as “attackers”.

Finally, participants identified one last group of difficult behaviors - "blunt" people who seem not care, and have nothing to lose.

2. Emotional and Behavioral Consequences of dealing with difficult behaviors:

Participants expressed a range of consequences as a result of experiencing difficult behaviors:

- Difficulty being close or working effectively with the person
- Negative emotions such as anxiety, stress, insecurity, agitation, anger, and fear
- Reactionary behaviors including avoidance, confrontation/conflict, surrender, blaming, labeling.

"I do love work, but lately I often have headaches, heart palpitations, sleeplessness, and panic when I hear him entering the office, my heart pounds because I do not know if he will be happy or sad or angry. When he's happy, he protects people, supports them, yet when he is sad or angry he seems to destroy all relationships”.

"I often find she is relaxed, lovely, kind one day, but the next upset, agitated, aggressive and inflexible – I never know how to respond”.

"My relationship with her who I have treated as my sister was good until one day she pointed at me and said, “you are self-defensive, have no respect, and take no responsibility at work – this made me very shocked, frustrated and no longer wanting to work”.

"
3. **Enhance self-awareness, empathy, motivation and cooperation:**

Participants reported that the focus groups and activities helped them understand themselves and others better, and to welcome both the strengths and limitations of others.

Participants were able to identify that individuals with type 1 personality need more time and that type 6 personality will ask a lot of questions to make sure everything is accomplished and completed in a safe and secure sense.

Participants were also able to identify personality types that work well together:

- Types 2 and 3 were identified as being able to experience empathy and concern with one another, and
- Type 2 and 9 were identified as being able to work together in a peaceful and supportive manner.

In contrast, types 6 and 3 were identified as conflicting when they worked together and resultantly needing number 9 to reconcile.

Safety, respect, and response in groups created a smooth process for learning and studying: participants found that they were listened to with thought and gave the following feedback:

- “we acknowledge and thank you for be in here to hear your stories as we work together for many years but we did not know much about you”
- “I found this interesting, I used to fall asleep when I was in class or meetings, however today you hear me, I hear you we hear everybody, even if sometime I don’t follow all the conversations, anyway I am awake today, thanks”.

In addition, respecting and accepting differences and diversity brought many benefits for all participants.

**Quantitative**

**Identify personality types:**

Figure 1: The nine enneagram types diagram (Riso & Hudson, 2000, p.17-30)
All nine personality types are simply strategies for survival, and all work well in their own way. Moreover, it simply offers a description, a map of the shape of personality structures which describes the mental, emotional and instinct elements of each type both psychological and spiritual. And the primary use of this system is to help us discover our true nature and the obstacles to expressing it in the world:

One: The Reformer- principled, purposeful, self-controlled, and perfectionistic
Two: The Helper-generous, demonstrative, people-pleasing, and possessive
Three: The Performer adaptable, ambitious, image-conscious, and arrogant
Four: The Artist- expressive, romantic, withholding, and temperamental
Five: The Thinker- innovative, cerebral, detached, and provocative
Six: The Loyalist- reliable, committed, defensive, and suspicious
Seven: Epicure- spontaneous, versatile, distractible, and excessive
Eight: The Protector- self-confident, decisive, dominating and confrontational
Nine: The Peacemaker-reassuring, agreeable, disengaged, and stubborn

The diagram also outlines three Centers Types:
1. The Instinctive or Body center: made up of personality types 8,9, and 1 - has issues relating to their anger and with relating to others.

2. The Heart or Feeling Center: made up of personality types 2, 3, and 4 - has issues relating to their feelings and with their image.

3. The Head or Thinking Center: made up of personality types 5,6, and 7 - has issues with their thoughts, or to be specific, fear and anxiety.

The arrowed lines on the diagram show the shift in mental and emotional strategy that one experiences in reaction to situations and the environment.

**Results of the Quick Enneagram Sorting Test:**

Not all participants were able to clearly recognize their personality types (indicated by the questions marks) and the results from each of three focus groups were also distinctly different.

<table>
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<th>Group/ No of Members</th>
<th>Type 1s</th>
<th>Type 2s</th>
<th>Type 3s</th>
<th>Type 4s</th>
<th>Type 5s</th>
<th>Type 6s</th>
<th>Type 7s</th>
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<td>1?</td>
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<td>3?</td>
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</table>

**Focus group 1**: In this group all 9 personality types were evident.

The participant with type 6 personality (loyal, questioner, faithful) provided the following perspective:

When given the opportunity to ask questions, she would indeed like to ask many questions, which helps her find the response that gives her a sense of security. However, by asking many questions, she felt it was causing trouble to others because they reflected that she harassed and opposed them. She realized that asking many questions to clarify the matter was necessary for her, but when she was stressed, by repeating many questions in the same content and for many people without any answer it was not acceptable.
The participant’s description is also consistent with the narrative of the number six personality type in the Enneagram Model that is dedicated, responsible, defensive, and anxious and tends to seek safety through advising.

In this group of people with nine different personality types, they enjoyed exposure to the conversations, were open to exchanging ideas, created more variety and had a more flexible approach in team work.

**Focus group 2**: More than two-thirds of the participants in this group believed they belonged to the number 2 personality type (the helpers/givers): and 3 group participants felt they belonged to the number 6 personality type (the questioner, the faithful).

The participants with the number 2 personality type identified they are happy to help others. But also identified:

"*Being willing to support and help others means it is difficult to deny others*”.

These participants further identified difficulties voicing their needs or expectations at work and feeling rejected or disregarded if their needs were not met or identified.

On the other hand, type 6s in this group found it difficult to understand why their co-workers could not clarify things that they would like to know clearly.

This group has a substantial number of people in the type 2s and the type 6s, and they seem to have trouble in understanding and accepting each other, which creates a stressful workplace. Other the hand, they also are hard workers, faithful, and care for others and their work.

**Focus group 3**: I number of participants in this group had trouble clearly identifying what type of personality they were.

However, the type 8 participant who was able to clearly identify as that personality type recognized that she was working, but had a tendency to give up and not see projects through to the end, when things became difficult.
One participant identified with many qualities of different personality types, namely, type 1, type 3, and type 5. With skills in different work areas, he noted that various positions had given him experience and led to him developing a friendly, flexible, and fair approach in the workplace.

The remaining members of this group reported that they did not understand clearly which personality types were prominent in the training, but these participants actively shared their experiences when working with people whose behaviors were challenging, and caused them to feel negative emotions. They also discussed events in life and childhood that may have led them to have specific personality types.

In addition, this group was energetic, passionate, enthusiastic, and pro-active. However, conversely, they also identified being quick to get bored, and wasting time when they could not find meaning in their life, in work or in their activities. The important messages that this group brings into the workplace: "Be friendly, open, cooperative, supportive, and fun. The more productive, the higher the performance".

**CONCLUSION**

For the group of participants with nine different personality types, it creates more diversity and a more flexible working environment than groups which have two and three personality types. The group dominated with types 2 described more empathy, kindness, support and helpfulness.

With experience activities in the program based on Enneagram guidance, the groups realized that there are not difficult people, only difficult behavior of people, and each personality has its strengths and weaknesses, positive and negative. Furthermore, they realized the importance of identifying weaknesses and recognizing negative emotions that are easily triggered when they receive unexpected behaviors and when they are in a state of stress.

In summary to work effectively with difficult behaviors there is nothing more than self-awareness and self-understanding, and always reminding oneself to manage oneself in times of triggering by situations and amend resources in each personality type. The workshop has created a highlight and a safe place for employees to express, learn from each other and be
trained in soft skills, improving communication and quality in their work, especially raise self-esteem.
Applying this work in the staff support program is only being applied at this university in Vietnam, it is just the beginning and there are many benefits and limitations, the author recommends those who are interested in employee motivation and communication can study and expand in other workplace as business, human resources and Enneagram research in Vietnam.

REFERENCES


Advancing Behavioral Health Integration in a Native American Community

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Institutional Review Board statement: This culminating manuscript has been approved for submission to the 18th International Mental Health Conference by the organization. It does not involve populations as part of the data collection or intervention. It is submitted for the requirements for the Doctor of Behavioral Health culminating project.
ADVANCING BEHAVIORAL HEALTH INTEGRATION

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ADVANCING BEHAVIORAL HEALTH INTEGRATION

Abstract

**Aims** - To examine how integrated healthcare is practiced among the Native American population at the Pascua Yaqui Tribe located in Southern Arizona, and how advancing behavioral health integration training to the Special Diabetes Program for Indians (SDPI) and behavioral health (BH) program compares to healthcare practices after the training.

**Methods** – Study participants from the SDPI and BH were identified based on their collective interest, desire to improve access to health care, involvement in decision-making about program development and implementation. Based on current literature and evidence-based practices on Integrated Healthcare models, study participants received the integrated healthcare training. A paired sample t-test statistical data analysis examined the levels of integrated measure and compared the training effects on programs commitment to integrated care, participants’ agreements to integrated care being superior form of care, and that integrated care is the appropriate level of care for patients with health conditions. The data analyzed from the post-six weeks measure on integrated healthcare questionnaire examined the impact of the training on participants’ skills, patient engagement skills, and the impact on program integration.

**Results** – Statistically significant responses $p < .05$ level, $t (13) = 2.48$, $p = .028$ were achieved with participants' perception that integrated care is the most appropriate patient care. At six-week follow-up, participants increased their confidence related to their practice skills, patient engagement skills and program integration delivery by 70%.

**Conclusion** – Behavioral health integration into medical health is the new paradigm, and can be successfully achieved through workforce training and improve health care outcomes through evidence-based healthcare practices and the organization’s collaboration / integration level.

**Keywords**: Behavioral Healthcare Integration, Levels of Integration, Native American.

**Acknowledgements**
ADVANCING BEHAVIORAL HEALTH INTEGRATION

This study was possible largely due to the support of the Pascua Yaqui Tribal health administrator, Mr. Reuben Howard, our medical director, Dr. de la Torre, the department director of the Diabetes Program, Holly Bryant and Director of Behavioral Health, Dr. Bob Henley, statistician, Dr. Rebecca Hill, and the study participants for many hours of consultation. I would like to express deep gratitude to Dr. Lesley Manson, for her excellent guidance, caring, patience, and direction while conducting this research and developing this manuscript. I would like to thank Dr. Jessica Pryor whose excellent knowledge in statistical analysis guided this research findings and analysis. Special thanks goes to Dr. Lesley Manson, Dr. David Rosen, and Dr. Tonie Dougherty who were willing to participate as committee members in my final defense. My sincere appreciation goes to Dr. Nancy Anderson who carved out time to correct my manuscript.
Advancing Behavioral Health Integration in a Native American Community

“Primary Care is the de facto mental health system” (Kessler & Stafford, 2008 p.9 -12). Patients with medical co-morbidities are often seen in the primary care clinics, have poor health outcomes due to unattended psychological problems. Research suggests that behavioral and medical comorbidities have 30 to 100% higher medical care utilization (Nelson et al., 2013; Summergrad & Kathol, 2014; Eaton, 2006). Untreated psychological conditions such as depression associated with diabetes and other chronic conditions can result in poor medical and psychological health outcomes, poor treatment and higher mortality rates. Tribal members commonly deal with chronic diabetes mellitus, cardio-vascular conditions and obesity, all of which can impact behavioral, functional and emotional outcomes. By embedding behavioral health care with primary medical care, using health education of medical conditions to promote and activate health behavior changes, better health outcomes can be achieved. This approach will potentially reduce high utilization of healthcare hospital visits, hospital days and prescription costs by 10% (Katon, W. J., Lin, E. H. B., Von Korff, M., Ciechanowski, P., Ludman, E. J., Young, B., McCulloch, D. 2010).

Today, emerging integrated health care models are innovative team-based Primary Care Behavioral Health (PCBH) integration approaches, which addresses wellness by treating the body and mind of the individual. Such approaches require behavioral health treatment integration into primary care settings (Miller, B. F., Petterson, S., Teevan, B., Burke. 2014; Majzoub Perez, K., Flier, L., D'Couto, H., Rudder, M., Thakker, A., Weems, J.... Frolkis, J. 2015).

Defining Integrated Healthcare

“Integration” is defined as an effort to unify care for physical and mental health concerns. “Team-based collaborative models” describe at working together, partnering, developing linkages or offering support with the goal of a unified treatment plan, to achieve better health outcomes for the population. The Institute of Medicine (IOM) defines integrated treatment as “interactions between clinicians to address the individual needs of the client/patient and consists of any
mechanism by which treatment interventions for co-occurring disorders are combined within the context of a primary treatment relationship or service setting” (2006, p. 213). This may involve restructuring personnel and workflows that are efficient, effective and sensitive to the needs of the patient, while focusing on patient safety.

The Substance Abuse Mental Health Services Administration (SAMHSA) created a six-level framework for integration for improvement in process, outcomes and practice management (Scharf, D.M., Eberhart, N.K., Hackbarth, N.S., Horvitz-Lennon, M., Beckman, R., Han, B., Lovejoy, S.L., Pincus, H.A., Burnam, A.M., 2014). In order to operationalize integration, healthcare practices benefit from reviewing and identifying their current operationalization of tasks on the SAMHSA framework for integration to assist in strategic planning and goal development.

The Levels of Measure (LIM). The LIM is an easy to use, short and concise, 35 item, 4-point Likert scale (1= never, 4 – always) measurement of integration. Higher scores on the LIM reflect higher levels of integration. It is important to assess levels of integration through a measurement tool for progression measurement. The LIM may be utilized with multiple professionals. The LIM assess the beliefs and commitment of professionals who represent a range of roles and titles on a continuum of health and wellness in primary care and behavioral health. The LIM serves to evaluate and measure integration in the organization and assist in planning and advancing integration. Data from the LIM assists in strategic planning for integration and will identify program and training strengths and opportunities available to improve healthcare (Agency for Healthcare Research, 2010).

**Strategic Linkages between Primary Care and Behavioral Health**

The tribal and diverse urban health needs of the Native Americans have been the focus across Indian Country due to the rising health care crisis in the United States. This paper reviewed the notable work done by the National Tribal Leaders’ Forum, which will inform future direction in terms of research and clinical practice to support integrated health care in a tribal community in Southern Arizona. “Tribal health care practices that are holistic encompass the physical, mental,
emotional, spiritual well-being of individuals, families and communities” (Tribal Public Health Initiative, 2015). A systems approach to public health involves developing strategic linkages and partnerships of tribal, urban, regional and national tribal organizations in the advent of self-determination legislative efforts to support tribal sovereignty. The eleven tribal epidemiological centers (Tribal Public Health Initiatives, 2015) have authority to manage health information systems and support health programs through the Patient Protection and the Affordable Care Act of 2010. A systems-focused funding, rather than disease and program specific funding, is proposed through this initiative.

Recent perceptions of young adults in an Inter-tribal hearing session in Sells, Arizona with the representatives of Substance Abuse Mental Health Services Administration (SAMHSA) and the National Institute of Health (NIH) indicated the growing concern of alcoholism and other drugs and suicide rates among Native Americans in Arizona (Chester, A., 2015, July, Legislative Branch, Hearing session, Health and Human Services, conducted at the meeting of the Tohono O’Odham Nation, Sells, Arizona). There is a significant need for a more comprehensive delivery of care that would consider health promotion, better nutrition, exercise, and accessibility to transportation to medical appointments due to the high rates of poverty, crime, exposure to violence, physical and sexual abuse, high rates of unemployment, lack of support and traumatic experiences that affect both physical and emotional health of Native Americans (Deters et al., 2006; Gnanadesikan et al., 2005; Jones et al., 1997; Kilpatrick et al., 2000). Native American youth reported high rates of depression and suicide, with adverse childhood experiences increasing the risk of suicide as well as risk of substance abuse (Herne, M. A., Bartholomew, M. L., & Weahkee, R. L. 2014). Significant correlation between heart disease, diabetes, poverty, and quality of nutrition and healthcare indicates that 36% of Natives with heart disease are likely to die before the age of 65 compared to 15% of Caucasians (Health Human Service, Office of Minority Health, 2001).
ADVANCING BEHAVIORAL HEALTH INTEGRATION

One may contemplate whether historical intergenerational trauma and post-traumatic stress disorder (PTSD) meets the criteria for chronic health conditions, often resulting in premature mortality and increased healthcare cost. Evidence-based models of care are innovative solutions to addressing the serious health challenges of the tribal people.

The Collaborative Chronic Care Model (CCCM) is one approach to providing integration of physical and mental health care where providers work together to provide care and monitor progress (SAMHSA-HRSA Center for Integrated Health Solutions). The model is clinically-effective and cost-effective for a variety of physical and mental health conditions (Katon et al., 2010). Care is coordinated in various healthcare settings with disease care management that supports the patient’s urgent needs, which are addressed to ensure continuity of care. The evidence from the CCCM seems to best meet the needs of the Native Americans as this model has been successful in lowering adverse outcomes and care costs for patients with depression and poorly controlled diabetes, coronary heart disease and other multiple conditions (Katon et al., 2010). Healthcare costs for those with comorbid depression and a chronic medical condition is twice as high as those without depression (Unutzer, J., 2013). When co-morbid diabetes and depression are untreated, it results in increased disability and mortality. The guideline-based, patient-centered management of depression and chronic disease with a team-based care model is most effective in the management of chronic conditions (Katon et al., 2010). The new paradigm of tribal healthcare is to advance primary care behavioral health integration inclusive with chronic disease management.

For the purpose of this paper, the term “tribal” and “Native American” are used interchangeably among the Pascua Yaqui Tribe (PYT). Tribal communities are close-knit communities and have some form of interdependency. Family and community are culturally celebrated where there is an understanding of support. On a macro level, the Indian Health Service has provided extensive resources to all American Indians and Alaskan Natives (AI/AN). Through
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many years, the tribes have practiced indigenous methods of healing and treatment. The Yaqui healers from Rio Rico, Mexico offer traditional medicine each month while social services addresses issues related to social determinants of health to provide comprehensive solutions in the community.

The multiple health departments are co-located on the reservation, where services are provided to promote the physical, emotional, social, cultural and spiritual needs of the tribes. Despite the potential for integration, the health departments seem to be segregated and do not equate to mutually working together in a systematic coordinated manner. Protocols and practices for each department are different. While confidentiality at the Behavioral Health department is respected, the lack of coordination at the primary care level impacts patient safety. Providers from either the primary care, dental or behavioral health may prescribe treatments for specific medical or psychiatric conditions independently, which has the potential for patient drug overdose, misuse, and abuse and drug contraindications. In addition, the tribal health departments operate five electronic health records systems, which do not allow for health information exchange and slows down reimbursements. Such silo systems create barriers to health information exchange, driving the cost of care high and increasing patient risks. A systematic review of tribal facilities and operations is needed in order to develop a strategic plan for successful system integration.

The New Paradigm

The paradigm shift in the healthcare system, the changes in America’s healthcare reform, namely the Patient Protection and Affordable Care Act of 2010 emphasizes the need to integrate the operational, clinical and financial elements of a healthcare organization. Financial incentives are available to healthcare organizations who implement integrated healthcare. The recent overhaul and the replacement of the Regional Behavioral Health Authority (RBHA) became apparent as the new RBHA who contracts with the Arizona Healthcare Cost Containment Care system had an implementation strategy to redesign the health delivery system in Southern Arizona. These federal
initiatives and incentives offer the tribe the opportunity to redesign the system so that healthcare is effective, equitable and efficient. Tribal members within the reservation and those who live in the greater Tucson area benefit through these coordinated efforts at service delivery.

Approximately 80% of patients’ access primary care at any given time in a year, primary care providers penetrate the population the most and have the benefit of reaching out to treat comorbid conditions (Robinson, P. J., & Strosahl, K. D. 2009). Participatory methods such as motivational interviewing strategies facilitate patient activation and engagement in their health behavior change through enhanced sustained partnerships with the provider. In a year, Physicians Foundation survey conducted in Massachusetts, about 79 percent of patients indicated that the quality of time spent with their primary care physician and the high levels of empathy by their doctor were the two main contributing factors to high patient-provider satisfaction (Ray, 2012). Higher levels of patient satisfaction would result in patients’ better understanding and education of their health issues, improved self-management of their chronic conditions, increase in patient activation and retention in treatment due to perceived success of program goals. These outcomes were positively correlated with better health outcomes as evidenced by 73% who achieved their health goals (Adams, S. R., Goler, N. C., Sanna, R. S., Boccio, M., Bellamy, D. J., Brown, S. D. Schmittdiel, J. A. 2013). Thus, it is essential that integration training include such engagement and communication strategies.

Implementing behavioral health integrated into primary care (inclusive of one-stop for care / same day/ warm handoffs) is far more effective due to communication and system linkages than merely sending referrals that are seldom followed up by patients. Integration improves patient outcomes and coping skills for the management of chronic illness (Richter et al., 2012; Horevitz, 2011). In addition, integration enhances patient safety and quality serve to facilitate Primary Care Physician and Nursing management of behavioral health issues (Friesen, White & Byers, 2008). Primary Care Behavioral Health integration which incorporates principles of patient engagement,
patient safety and population healthcare is a promising approach to extending behavioral health services to tribal patients to address the burden of healthcare problems and cost.

**Chronic Care Model Considerations at the Tribal Nation**

The Chronic Care Model (CCM) was developed by Wagner (Institute for Healthcare Improvement) and has been successful in improving ambulatory care by changing the routine delivery of care, which leads to improved patient care and better health outcomes. The CCM represents an integrated framework that guides patient-centered care, is population-based care to provide self-management support enabled by a multidisciplinary team that utilizes supportive technologies (Coleman K, Austin B.T, Brach C, Wagner E.H, 2009). The Indian Health Services has implemented the Chronic Integrated Healthcare Model to address the physical and behavioral health challenges of its population. A broad approach to PCBH integrated care models is most applicable and efficient in rural remote areas such as the tribal reservations (Murray & Kellar, 1991; Oliveira-Berry, 2003). While co-located models; traditional mental health and primary care require less training, successful training with integrated behavioral health services in rural settings require a broad range of competencies that would incorporate cultural beliefs and the inclusion of alternative herbal medicine and tribal practices. Interprofessional training will prepare the tribal nation for future PCBH integration practices.

Integrated chronic care models also pose ethical challenges. A challenging ethical dilemma in the rural area is that providers are prone to complex relationships and are having to treat families in primary care behavioral health settings. The privacy and individual rights of clients and professionals need to be safeguarded and balanced with treatment needs, expectations and the ethical guidelines of the interprofessional care team members. While it is common to treat members of the family in a primary setting, it is uncommon in specialty behavioral health care. A review and identification of interprofessional ethical considerations is important to identify appropriate consent and confidentiality procedures for integrated CCM (Reiter & Runyan, 2013).
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An example of a CCM in tribal health is the Diabetes Prevention Program. Diabetes Prevention Programs have been known to be instrumental in reducing the incidence of diabetes by 58 percent among adults with pre-diabetes and by 71% in those aged 60 years or older with a structured lifestyle change intervention. According to the Centers for Disease Control (CDC), “approximately one-half of all adults have at least one chronic health condition and 25% have two or more chronic health conditions” (Centers for Disease Control, 2014). Engaging clinicians in screening, testing and diabetes prevention and teaching self-management skills is a widely accepted nationwide initiative through the CDC. Researchers have identified CCM’s as demonstrating the highest outcomes when implemented in integrated interprofessional teams for patient management (Greenwood et al., 2014; Giese et al., 2014; Tang et al., 2014; Manary et al., 2013).

**Organizational Leadership and Tribal Sovereignty**

The Indian Self-determination and Educational Act of 1975 set the stage for Native American sovereignty and self-sufficiency. This Act empowered Native Americans who developed their own programs and was a major force for self-governance. The Health Director is the chief administrator of the tribal health department. Although the primary clinic, the pharmacy, and the dialysis clinic are contracted services, other departments such as community nursing, social services, long term care, infant and maternal services, behavioral health, and health-related grant-funded programs are co-located and silo-managed on the tribal reservation. Building strategic alliances in influencing departments to work collaboratively is a slow and arduous process. Having a co-located system does allow for alignment, but a more coordinated and focused strategy would benefit and achieve better integration when funding, clinical and service delivery are well formulated and target communication, access, culture, values and teamwork (De Jong and Jackson, 2001., Burns et al. 2001., Fawcett and Cooper, 2001., Kodner, 2002). In addition, the stigma of mental illness, native beliefs that are embedded in Christian beliefs, historical trauma, anger, oppression, and the tradition of termination and broken treaties are all areas needed to have in
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consideration when developing programs in tribal authorities (Hendrix, 2001). System wide redesigns with tribal buy in and input with consideration for the social, cultural and health challenges may present as first step to health care innovation.

While healthcare policies and procedures inform practices, this project will recommend possible amendments to policies upon its completion. For example, organizational leadership that embraces innovation and supports employees who can join forces and work towards a common goal through collaboration and communication supports integration. This is a new evolving process with a few of the tribal council members on board with understanding healthcare integration. This culminating project is designed to engage tribal members, professionals and stakeholders in the discussion, planning, designing and strategically implementing, collaborating and integrating healthcare sub-systems that generally operate in silos. The tribal community draws down 90% of healthcare revenues from the federal government. It takes pride in being a sovereign nation. While the task of integrating systems is daunting, it is not insurmountable. The wellness center represents the future of healthcare for the tribe. Safe and high quality patient care is the goal of the Special Diabetes Program for Indians (SDPI) and Behavioral Health programs. Leaders of both these teams will converge, collaborate to strategically design and implement the program, allocate resources and prioritize training and staff performance. This project examines and advances the continuum of health and wellness at PYT health department through strategic planning and action.

Statement of Problem

Primary care at the Tribal health is contracted through the El Rio Health Clinic and the SDPI which is one of the community-based programs on the PYT reservation. These departmental systems are co-located with the Centered Spirit Behavioral Health Program managed by the Tribal Regional Behavioral Health Authority (T/RBHA). These systems operate separately rather than interdependently. Despite departmental proximity, referral and coordination of care does not follow the same day access to care. Patient electronic health record systems are separate and different.
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Thus the different systems present as barriers among providers as they strive to provide whole-person care through biopsychosocial assessments and treatment (Collins et al, 2010). Providers are known to coordinate care as they encounter high-risk patients during a medical mental health emergency that follows risk strategy implementation indicative of minimal to basic level collaboration (Level 1 and 2) on the SAMHSA-HRSA six-level integration framework. The co-located model confront many challenges that does not meet the four main pillars of primary care: access to care, person-focused care, comprehensive care and coordinated care with specialty providers (Starfield, 1998).

This project analyzed and evaluated the level of integration pre and post integrated healthcare training and education on the principle of a shared care, team-based collaborative care model to enhance patient-provider engagement, to improve care delivery and subsequently provide cost effective services. Clinical and healthcare employees will receive education and training around the standards of the four main pillars of primary care: access to care, person-focused care, comprehensive care and coordinated care with specialty providers (Starfield, 1998) through an integrated healthcare training provided in this study. The Agency for Healthcare Research Quality Health Literacy, Universal Precautions Toolkit for primary care practices and the Team Strategies to Enhance Performance and Patient Safety (Team STEPPS) provide resources to enhance support and health promotion to patients with all levels of literacy, and are evidence based training curricula to integrate teamwork principles in health care practice. Study participants who provide care at the tribal health departments received integrated healthcare training with a focus on integrated care delivery. This project served as a pilot project for the tribal community, an initial step in the journey toward tribal health system integration as the new health building will house all health services.

Interprofessional competencies and the development of patient-centered practice was supported through training, research and evaluation. Through a coordinated effort, this project guides professional and institutional development, provide a foundation for a learning continuum,
and creates opportunities to integrate workforce through complementary and collaborative competencies. This project involved teamwork around ethical values and principles such as obtaining consents, team-based planning and interventions, communication and coordination of treatment, cultural competency and adaptation of best practices as applied to the tribal community. It provides enhancements to improve work flow process and other quality improvement areas. As care teams re-design themselves, the practice climate enhances a coordinated collaborative-shared care approach. Literature provides further evidence of how healthcare expenditures can be reduced due to decreases in emergency department visits and high utilization of hospitalization through behavioral interventions that improves medication adherence (Raven, M. C., Doran, K. M., Kostrowski, S., Gillespie, C. C., & Elbel, B. D. 2011). For the purpose of this project, the researcher evaluated the progression of a pilot study focusing on the collaboration between behavioral health and the SDPI in a co-located care framework, post trainings and assessment and how this process has the potential for continuous quality improvement.

**Research Questions**

The following study addressed the following research questions:

1. What is the current level of integrated care at the Tribal Primary Care utilizing SAMHSA’s standard framework of integration following a review and observation of Tribal Primary Care and participant completion of the Levels of Integrated Measure instrument?

2. Will study participants completing the LIM rate that “the Diabetes program is committed to integrated care” at a higher degree post Integrated Healthcare Training?

3. Will study participants completing the LIM rate that “integrated care is a superior form of patient care” at a higher degree post Integrated Healthcare Training”?

4. Will study participants completing the LIM rate that “integrating care ensures that patients receive appropriate care” at a higher degree post Integrated Healthcare Training?
ADVANCING BEHAVIORAL HEALTH INTEGRATION

5. What are the perceived tribal employee future directions and benefits of advancing integrated care as noted on the Integrated Healthcare questionnaire?

**Hypothesis**

The study addressed the following hypotheses:

1. Post the “Integrated Healthcare Training,” the program will report that “the programs are committed to integrated care” at an increased level when compared to pre-training as measured by the Levels of Integrated Measure.

2. Post the “Integrated Healthcare Training,” study participants will report that “integrated care is a superior form of patient care”, at an increased level when compared to pre-training as measured by the LIM.

3. Post the “Integrated Healthcare Training,” study participants will rate that “integrating care ensures that patients receive appropriate care” at an increased level when compared to pre-training as measured by the LIM.

**Methods**

**Description of Setting**

The setting was at the Pascua Yaqui Tribal Health Department on the reservation, 30 miles southwest of the city of Tucson in Southern Arizona. The area of study was the Special Diabetes Program for Indians, which was a grant funded community-based service, which forms linkages to the Primary Care Clinic and Centered Spirit Behavioral Health department on the tribal reservation where data was collected. Providers at this site were a Registered Dietician, two Diabetes Educators and 12 Fitness Specialists who provided health screenings, education and training and health promotion activities. The SDPI program serves roughly one thousand tribal patients served annually. The estimated burden of adult diabetes for the Pascua Yaqui Tribe in Pima County was
4,626 (27.8%) in 2013 and 4,112 (24.8%) in 2014, while the estimated burden of obesity in children birth to 18 years was 88 out of 167 (52.6%) in 2012 and seemed to increase to 130 out of 167 (77.8%) overweight or obese in 2014. The percentage of obesity in adult diabetics at the Pascua Yaqui Tribe was 79% in 2012 (Krause, A. Annual Report, 2014).

**Description of Study**

The study served as a pilot project for Tribal health to determine the impact of the “Integrated Healthcare Training” within the SDPI. If the study illustrated positive improvement, then the hope is for the program to be further implemented throughout the Tribal Health Department to continue integration efforts.

The study included a review by this author of the Tribal Health Department as a whole with regard to identifying the current level of integration on SAMHSA-HRSA’s standard framework of integration. Dougherty, Mc Daniel, and Baird (1995, 1996) developed a classification by level of collaboration and integration to reliably categorize integration implementations, which provided meaningful comparisons of implementation or associated health outcomes. This was used as a global perspective and assisted in identifying areas for improvement and for further discussion. The current level of integrated care at the site was assessed to be at a Level 2 (Basic collaboration at a distance) based on the SAMHSA six level framework of integrated care prior to the integrated healthcare training. A statistical analysis determined whether or not the change from before the training to afterwards was significant. In addition, an Integrated Healthcare Training was developed utilizing the pre- and post-survey results on the LIM. The training included: Definitions, assessment, and impact of integrated care on patients, team members, and systems. This training was provided to the SDPI employees and Behavioral Health case managers. The staff, management, and providers associated with this program were invited to the training and completed pre- and post-training questionnaires specifically related to integrated care and assessment of the training.
program. The Special Diabetes Project for Indians included the following healthcare team members:

1. A Physician who was a champion for diabetes education, health, and wellness within Tribal Health;

2. A Registered Dietician and Interim Director of the Special Diabetes Program for Indians responsible for crafting the diets of patients and for educating individuals on the benefits of maintaining proper dietary standards. The dietician was responsible for working closely with their clients, as well as professionals from a variety of different fields. The dietitian was responsible for consulting with health care workers about the particular needs of their patients, write grant request for research programs, analyze food content and composition for manufacturers, develop specialized diets, ensure that proper safety regulations are being addressed, and inspecting meals before they are served. The dietitian prepared budgets and supervise the purchase of food service equipment.

3. Diabetes Educator educated patients on the necessary lifestyle changes involved in a diabetes diagnosis, including nutrition, medication, physical activity and glucose testing. She collected patient data to monitor health status and proactively manage patient conditions.

4. Eleven personal Fitness Trainers instructed individuals about exercise activities that improve strength, cardiovascular endurance and flexibility. First, they collaborated with clients on personal fitness goals, then developed an exercise program, tailoring workouts to client needs. They demonstrated movements, asked clients to repeat them while offering tips on improving form, and motivated exercisers to return for classes at a regular schedule so physical progress would continue steadily. They explained safety rules and how to use exercise equipment. They also gave information on nutrition, weight control and general lifestyle
5. Two Behavioral Health Technicians understood and implemented individual treatment plans, recorded patient behavior and provided a safe, supportive environment for the patients. Technicians provided and recorded patient medications and assisted in daily activities.

Procedures

The procedures for this study were as follows. The author completed a formal review of the Tribal Health Department with regard to the SAMHSA-HRSA framework of levels of integrated care in appendix C. This was reviewed and discussed with Tribal Health department administrators. Formal written analysis and identification of specific SAMHSA quality level identifiers was provided for review, baseline, and future quality improvement development. The author developed an Integrated Healthcare Training which included definitions, assessment, and impact of integrated care on patients, team members, and systems. The SDPI Director and the Behavioral Health Program manager requested employees to participate in this “pilot” study/Integrated Healthcare Training with the approval of the Health Administrator.

Table 1

<table>
<thead>
<tr>
<th>Procedural training steps with timelines</th>
<th>Week 1</th>
<th>Week 2</th>
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<tbody>
<tr>
<td>1. Sample size: 15 employees participated in the Strengths, Weakness, Opportunity, Threats Analysis related to integrated care pilot study</td>
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<tr>
<td>2. Orientation to the pilot study and signed consents to attend training and to participate</td>
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<tr>
<td>3. Completed pre LIM</td>
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<tr>
<td>4. Provide training on integrated health care</td>
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<tr>
<td>5. Completed post LIM</td>
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<tr>
<td>6. Follow up with discussion and integrated healthcare questionnaire</td>
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Training Topics. Training outline included the Definition of Integrated care, evidence on the benefits of integrated care, medical and co-morbid health conditions and the cost of care, and integrated healthcare practices: team based coordinated care was covered in a day.

The Integrated Care Training was presented by the author in person. The training sections covered the following topics:

- What is Integrated Care?
- Co-morbid medical and behavioral health conditions.
- Key Components of Integrated Patient and Family Centered Care
- Interdisciplinary Team-based collaborative care

Participants of the training completed the pre Levels of Integration Measure (LIM) questionnaire and brief education/introduction to the topics and education, which was presented in the formal Integrated Healthcare Training. In addition, a formal 6-week post follow-up with the participants was completed. This was a participatory interview with the same study participants.

Measures

The Levels of Integration Measure (LIM), in Appendix A, was developed by Antioch University “to rate the degree to which behavioral health providers or behavioral health care is integrated into primary care settings from the perspective of staff and /or providers” (Fauth, J. 2010). LIM is an easy to use, short and concise, 35 item, 4-point Likert scale (1= never, 4 – always) questionnaire. Higher scores on the LIM will reflect higher levels of integration. The LIM includes six domains: clinic system integration, beliefs and commitment, clinical practice, interdisciplinary alliance, training and consultation and leadership (Fauth, J, 2010). The LIM served to evaluate and measure integration in the organization and will assist in planning and advancing integration.
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Although each participant completed the LIM pre- and post-training, only questions #11, #12, #13 was reviewed statistically.

11. The program is committed to integrated care
12. Integrated care is a superior form of patient care
13. Integrating care ensures that patients receive appropriate care.

A follow-Up questionnaire, The Integrated HealthCare Questionnaire (see Appendix B), was developed and utilized to assess targeted benefits of the training on the participants, six-week after this training. The questionnaire covers 10-questions, it is a Likert scale, and targets the benefits of the training on:

- How the knowledge of integrated healthcare training transforms integrated care practices;
- How integrated care practices improved since the training and education;
- The SDPI program’s ability to increase and sustain membership enrollment;
- The participants’ motivation to pursue training certification which will allow them to bill for services;
- Multidisciplinary team decision in the promotion of integrated care practices;
- How integrated care compares to current care practices;
- Patient engagement skills and health behavior change;
- Management of health conditions through health behavior change.
- The value of support groups in health behavior change.

The Integrated Care Questionnaire was developed by the author and data collected was analyzed. It assessed participants’ perceptions on the benefits of training on integrated practice skills, patient engagement skills and program integration. The measure was a 5 point Likert scale, with (1) being “Strongly disagree”, (2) being “Disagree”, (3) being “Undecided”, (4) being “Agree”, and (5) being “Strongly Agree”.
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Data Collection

The author with the approval of Tribal Health administration reviewed and identified the Tribal Health Department via SAMHSA integration framework. This was a qualitative review to identify areas for further integration project management and development. The participants in the Integrated Healthcare Training completed a pre- and post-LIM on the same day of the training. In addition, the Integrated Healthcare Training Follow up Integrated Care Questionnaire was completed six-week after the training. All questionnaires were completed in pencil-paper format and submitted directly to the author. The data has been stored in a confidential filing area within the Tribal offices, according to Tribal project storage guidelines, data will be destroyed once the project data is no longer needed by Tribal Health authority.

Research Design

This culminating project is a pre-post research design. The design incorporated a qualitative review of the SAMHSA framework and Integrated Healthcare Training Follow-Up Questionnaire. In addition, the design incorporated pre-post training in comparison with regard to the LIM. The intent was to collect observations and data from participants related to the Integrated Healthcare Training to determine benefits toward further training opportunities within the Tribal Healthcare Department. The research design provides the department with data as an initial step towards continuous quality improvement and quality assurance.

Data Analysis

A paired T-test was conducted on the pre and post Levels of Integration Measure (LIM) comparing participants’ response to the training and their rate of improvement and perception about integrated healthcare practices on the following questions:

11. The clinic is committed to integrated care.

12. Integrated care is a superior form of patient care

13. Integrating care ensures that patient receive appropriate care.
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In addition, a descriptive data of study participant characteristics and qualitative analysis was completed on the SAMHSA framework and Integrated Healthcare Training Follow up Questionnaire data which analyzed participant skills, patient engagement skills and program integration.

Results

Participant Statistics

The Levels of Integration Measure (LIM) was completed by clinical and healthcare professionals who participated in a one-day training on the integration of primary and mental health care services. The LIM was administered as a pre-test prior to participation in the training and again as a post-test after training completion. The study participants are employees who provide both diabetes prevention services and behavioral health services to a Native American tribal community in southern Arizona. At pretest, the sample size was 17, but only 15 participants completed the pre- and post-training questionnaires. One participant did not participate in the training after completing the pre-training questionnaire, and one participant did not complete the post-training questionnaire; consequently, these two participants were eliminated from the final analyses.

Participant demographics of 15 individuals that completed the study included 8 (54%) females and 7 (46%) males within the age range of 24 to 57 years of age ($M = 37.00, SD = 10.20$). The majority of the participants identified themselves as Native Americans/ Tribal 80% ($n=12$), followed by Non-tribal: Caucasian/White 13% ($n=2$) and African American 7% ($n=1$). Thirteen participants (87%) provided direct services at the Diabetes Prevention program and two participants (13%) provided direct services at the Behavioral Health program. Ten participants (67%) had primary responsibilities of providing direct health services and 5 participants (33%) had additional responsibilities of a team lead function. One participant has a designation of being a provider with a
professional license and is involved in program management duties. Table 2 describes participant characteristics by sex, age, ethnicity, job categories and responsibilities.

**Table 2.**
*Descriptive Characteristics of Participants*

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th></th>
<th>Tribal</th>
<th></th>
<th>Non-Tribal</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
<td>54</td>
<td>7</td>
<td>87.5</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>Male</td>
<td>7</td>
<td>46</td>
<td>5</td>
<td>71.4</td>
<td>2</td>
<td>28.6</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 to 30 years</td>
<td>4</td>
<td>26.7</td>
<td>4</td>
<td>26.7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>31 to 40 years</td>
<td>6</td>
<td>40</td>
<td>4</td>
<td>26.7</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>41 to 50 years</td>
<td>3</td>
<td>20</td>
<td>2</td>
<td>13.3</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>51 years and over</td>
<td>2</td>
<td>13.3</td>
<td>2</td>
<td>13.3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Job Categories</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team lead</td>
<td>5</td>
<td>33.3</td>
<td>3</td>
<td>20</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>Direct service</td>
<td>10</td>
<td>66.7</td>
<td>9</td>
<td>60</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>Job responsibilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes program</td>
<td>13</td>
<td>86.7</td>
<td>11</td>
<td>73.3</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>Behavioral health</td>
<td>2</td>
<td>13.3</td>
<td>1</td>
<td>6.7</td>
<td>1</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Age Mean = 37.00, SD = 10.20
Descriptive Statistics

Descriptive statistics including mean and standard deviation were computed for all study outcome variables: the clinic is committed to integration, integration is a superior form of patient care and integration ensures patients receive appropriate care. See Table 3 for these values.

Table 3. Descriptive Statistics of Level of Integration Measure Survey Outcomes for Study Participants

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment to integration.</td>
<td>4.00</td>
<td>3.77</td>
<td>3.75</td>
<td>3.86</td>
<td>4.19</td>
<td>3.79</td>
</tr>
<tr>
<td>Integration is superior patient care.</td>
<td>.816</td>
<td>.725</td>
<td>.856</td>
<td>.663</td>
<td>.655</td>
<td>.579</td>
</tr>
<tr>
<td>Integration is appropriate care.</td>
<td>2 – 5</td>
<td>3 – 5</td>
<td>2 - 5</td>
<td>3 -5</td>
<td>3 – 5</td>
<td>3 – 5</td>
</tr>
<tr>
<td>N</td>
<td>16</td>
<td>13</td>
<td>16</td>
<td>14</td>
<td>16</td>
<td>14</td>
</tr>
</tbody>
</table>
Review of Research Question and Hypotheses

The following research assesses the impact education and training will have on clinician-patient relationship and subsequent care.

1. Will providers / participants completing the Levels of Integrated Measure (LIM) report that “the program will report an increase in their commitment to integration post training on integrated health care?”

2. Will providers / participants completing the LIM rate that “integrated care is a superior form of patient care” at a higher degree post Integrated Healthcare Training?”

3. Will providers / participants completing the LIM rate “integrating care ensures that patients receive appropriate care” at an increased degree post completing Integrated Healthcare Training?”

The described study is intended to address the following hypotheses:

1. Subsequent to the “Integrated Healthcare Training,” the program will report an increase in participants’ commitment to integration, as measured by the LIM.

2. Subsequent to the “Integrated Healthcare Training,” providers will report that “integrated care is a superior form of patient care,” at an increased rate on the LIM.

3. Subsequent to the “Integrated Healthcare Training,” providers will rate that “integrating care ensures that patients receive appropriate care” at a higher degree.

Preliminary Analysis.

Paired samples t-tests were conducted to determine if there were differences between the pre- and post-training responses for each of those survey items. It was hypothesized that there would be significant differences between the pre- and post-training survey questions, which indicates significant change in average score from pre- to post-training surveys. The null
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hypothesis proposes that the responses from the pre- to post tests are similar and not statistically different from each other.

The responses for item related to commitment to integrated care as measured by the LIM on the pre- and post-training were not statistically significant at the $p < .05$ level. This means there was no significant change from the pre- to post-training responses, $t(12) = 1.00, p = .337$.

Similarly, the responses for item related to integrated care as a superior form of patient care on the pre- and post-training were not statistically significant at the $p < .05$ level. This indicates there was no significant change in ratings from the pre- to post-training surveys, $t(13) = -0.46, p = .66$. However, the responses for item related to integrated care is appropriate patient care on the pre- and post-training were statistically significant at the $p < .05$ level. This indicates there was significant change in ratings from the pre- to post-training surveys, $t(13) = 2.48, p = .028$.

**Statistical Analysis of Results by Hypothesis**

**Hypothesis 1**

In order to test the hypothesis that post-training commitment to integrated care was increased from pre-training as measured by the Levels of Integrated Measure (LIM), a paired sample t-test was conducted. Results were not significant at $p < .05$ level, $t(12) = 1.00, p = .337$, meaning that no significant difference was found between the scores of pre- and post-test responses about commitment to integrated care as measured by the LIM. We are not able to, therefore, reject the null hypothesis; there was no increase in subjects’ commitments to integration as a result of the integrated healthcare training program.

**Hypothesis 2**

A paired samples t test was conducted to test whether providers would have increased responses after training that integrated care is a superior form of patient care, as measured by the
LIM. Again, results were not significant at \( p < .05 \) level, \( t (13) = .46, p = .655 \). We are not able to, again, reject the null hypothesis, providers did not report that integrated care is a superior form of patient care.

**Hypothesis 3**

A paired samples t test was conducted to test whether, subsequent to the “Integrated Healthcare Training,” providers rated “integrating care ensures that patients receive appropriate care” at an increased level as measured by the LIM. Results were statistically significant at \( p < .05 \) level, \( t (13) = 2.48, p = .028 \). The post-training results indicate that the responses for question 13, “integrating care ensures that patients receive appropriate care at an increased level when compared to pre-training as measured by the LIM scores were significantly different with \( p > .05 \). The results support the hypothesis and was significant.

Therefore, we are able to reject the null hypothesis, the providers did, indeed, indicate that patients receiving integrated care receive appropriate care at an increased level.

**Secondary Data Analysis**

Secondary data was collected via the Integrated Care Questionnaire, an independent questionnaire developed by this researcher. The purpose of the secondary data was to gain an alternative perspective about tribal community participants’ beliefs and attitudes about integrated care independent of the existing data collected through the Levels of Integration Measure (LIM). The questionnaire was delivered six weeks post the initial training and data collection phase as part of a focused discussion on areas related to the participants’ belief about integrated care principles to patient care delivery, patient engagement and health outcomes, and as an assessment of participants’ current skills and readiness to embrace the delivery of integrated care. Table 4 shows the results of the survey with respect to their agreement, neutral, or disagreement of these three integrated care principles.
Table 4. *Descriptive Analysis of Secondary Data (Percentage of Responses on Integrated Care Practice, Patient Engagement, and Program Integration on Integrated Care Questionnaire)*

<table>
<thead>
<tr>
<th>Participants’ Responses</th>
<th>Participant IC practice</th>
<th>Patient Engagement</th>
<th>Program Integration</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreement</td>
<td>53.57%</td>
<td>83.93%</td>
<td>75%</td>
<td>70%</td>
</tr>
<tr>
<td>Neutral</td>
<td>46.43%</td>
<td>14.29%</td>
<td>25%</td>
<td>29.29%</td>
</tr>
<tr>
<td>Disagreement</td>
<td>0.00%</td>
<td>1.78%</td>
<td>0%</td>
<td>0.71%</td>
</tr>
</tbody>
</table>

Participants reported 53.57% agreement, 46.43% were neutral, and 0.00% were in disagreement regarding improvement in participants’ integrated care practice. This Integrated Care principle was measured through these questions.

1. Does your knowledge of integrated healthcare transform the way you provide care?
2. Has your integrated care practices improved since the training and education?
3. Would you be willing to get certified in integrated care so that you could bill for medically necessary services?
4. Is integrated care better than the care currently being provided?

While 83.93% participants agreed that integrated care improves patient engagement, 14.29% were neutral, only 1.78% was in disagreement. This integrated care principle was measured through questions about improved patient engagement.

1. Are patients more engaged in their health behaviors when provided with integrated care?
2. Does education about medical conditions and stress related to these conditions changes health behaviors?
3. Does healthy habits such as diet and fitness exercise change health behaviors?
4. Do attendance at support groups change health behaviors?
Regarding program integration, 70% participants were in agreement on the benefits of program integration, while 25% reported being neutral and 0.00% were in disagreement in this category. The following questions focused on program integration.

1. Does the Special Diabetes Program for Indians program able to increase and sustain membership enrollment?

2. Do you think that a multi-disciplinary team decision promote integrated care?

This integrated care principle reflects the SDPI program’s ability to increase and sustain membership enrollment in addition to the promotion of integrated care through multidisciplinary team decision-making. The secondary data analyses favors integrated care on the dimensions of participant practice, patient engagement and program integration by 70%, 29.9% were neutral and 0.71% were in disagreement.

Discussion Section

Purpose of the Study

This study was designed as a quality improvement process and an initial attempt to integrate behavioral health concepts and philosophy into the Special Diabetes Program in the tribal health department to improve access to care and improve the delivery of health services. The Special Diabetes Program for Indians is a grant funded program through the National Institute of Health and has been funded since 1999. The research student introduced the concept of integrated behavioral health within the Diabetes program which is an outreach primary care service linked to the tribal health department and is a co-located service in the community. Behavioral health has historically provided 36% of its revenues to support other departments such as alternative medicine and diabetes programs due to inability to hire workforce that meet the educational criteria to bill for medically necessary services. The tribal policy that supports tribal recruitment necessitates workforce training and retention to support its programming. Integrating behavioral health service intervention into the diabetes program would address co-morbid diabetes and depression, improve
health care conditions, and the patient experience of care and cost efficiency to make it a viable program. This study aimed to train and measure pre- and post-training outcomes.

**Summary of Sample**

This study has a sample size of 15 (n=15), which is inclusive of different age ranges, gender and ethnicity. The sample is representative of the employee population of the tribal health department (Table 2). The sample is reflective of tribal sovereignty and tribal hiring preference to serve a specific cultural population on tribal land. Demographic descriptors of participants reflected 80% (n=12) belonged to tribal ethnicity, and 20% (n=3) were non tribal. The study participants met the criteria for their specific job categories with high school or associate level of education and met the roles and responsibilities of the specific positions with the diabetes program. The Dietician has a graduate level degree and licensure. Likewise, behavioral health represented participants who had an undergraduate degree and were adequately qualified to perform care management duties and functions. Five of the 15 participants were in team lead positions and were distributed fairly on the age range continuum, with the mean age being 37.5 years. Further findings of this study indicates that 60% of those in the team lead position belonged to tribal ethnicity, while 40% were of non-tribal ethnicity.

**Review of Results and Significance of Findings**

The study recruited the diabetes and behavioral health program employees from the Tribal health department with a focus delivering integrated healthcare principles and concepts that included the value of behavioral health interventions to address co-morbid diabetes and depression, patient engagement skills, team-based collaborative care that will improve the access to care and increase reach in tribal membership in health services on the tribal reservation. On analyzing their level of understanding on integrated care principles and practices through Integrated Healthcare Training, as measured by a pre- and post-training analysis on the Levels of Integration Measure tool and a six-week follow up instrument developed by the researcher analyzed the participants’ skill
and confidence level, beliefs regarding patient engagement, and agreements on the program integration levels.

**Findings.** The training intervention was thoughtfully designed to include the definition of integrated behavioral healthcare defined as a high quality practice where behavioral health and medical providers work together to provide patient-centered and family-centered care to address life stressors, ineffective utilization of medical care, and stress-related physical conditions. This highlighted the traditional and cultural native values of inclusion and extending reach to all tribal members regardless of their mental health, substance abuse or medical conditions. The concept of empathy as it relates to whole person care was adopted in one of the participant selected role-play exercise, “survivor”. Robust team-based collaborative care was delivered through the “focus ring” exercise. Participants displayed teamwork through open communication, sharing responsibilities, increasing accountability, improving knowledge of patient engagement skills, shaping behavior change practices and practicing inter-disciplinary collaboration. Particular attention and recognition of mental health stigma by participants was addressed, though not measured in this study.

**Significance.** The six-week follow up questionnaire yielded significant findings regarding the importance and value of integrated health care by a 70% improvement in their commitment to integrated practice skills, patient engagement skills and program integration. (Table 4). Pre and post-training results were not statistically significant to support the hypotheses that the program is committed to integrated care, that integrated care is a superior form of care (Table 3). As hypothesized, “integrated care is appropriate for patient care” was significantly different with $p > .05$. The results support the hypothesis and was significant. While we are unable to show consistent evidence that post training had an effect on participants’ perception when training intervention was on the same day, the results suggest a positive effect after six-weeks. It is possible that the training played a role in changing participants perception positively, post-training as it measured whether the participants agreed, were undecided or disagreed that integrated care was
valuable to patient care. Promising evidence related to the post 6-week follow up evaluation utilizing the integrated care questionnaire identified significant findings about the increased level of agreements on participant practice skills, patient engagement skills and program integration implementation (Table 4). This post six-week interval evaluation demonstrates participants’ ability to integrate this knowledge, practice these skills and deliberate about program design and integration interventions. Such outcomes and findings support the hypothesis that integrated health care trainings can advance integration efforts to effect and impact the delivery of healthcare services.

A survey administered six-weeks following the training provided participants and programs opportunities for program planning, enhancement and development and was associated with the positive increase in response in the areas of participant skills (54%), patient engagement skills (84%) and program integration (75%). It should be noted that participants received additional trainings on Motivational Interviewing after this study to enhance their patient engagement skills as a quality improvement practice. A good indication that the training was well organized, impartially delivered and engaged participants in learning the integrated care model was evidenced by the absence of significant differences in responses by gender, ethnicity or age responses to all three of the hypothesized statements related to integrated health care training. Pre- and post-training: Levels of Integrated Measures (LIM) analyzed the responses of the study participants on three items. Participants expressed their agreements, disagreements or neutrality on the following areas; (a) the program is committed to integrated care, (b) integrated care is a superior form of integrated care, and (c) integrating care ensures that patients receive appropriate care. While the data analysis did not demonstrate a clinically significant statistical difference in pre and post training (Table 3), the study findings contributes to the literature that study participants rated high (60% to 80%) on agreements to each of the above questions pre-and post-training (Table 4).
The study provides supporting data to the SAMHSA-HRSA’s standard framework of integration post-training and provides meaningful comparisons before and after the training implementation (Appendix C). The diabetes program and behavioral health program while on site and co-located at the health department, have moved from basic collaboration from a distance (level 2) to basic collaboration on site (level 3). The study participants viewed themselves as collaborating albeit being co-located on the reservation at an increased level through collaboration, communicating and sharing resources as well as implementing medical and behavioral health interventions in their diabetes curriculum and programs. We have evidence that 63% of participants agreed that the training transformed the way they provided care and it changed their beliefs about empathy and compassion as elements of whole-person care that could influence patients’ health behavior change and health status outcomes. Sixty-four percent of the participants agreed that their program was capable of increasing and sustaining membership enrollment. It was not surprising that all 15 participants agreed that training and education on medical and stress-related conditions changes patients’ health behaviors. Their level of motivation was reflected in their responses as evidenced by 70% agreeing to obtain certification in integrated care so that they could bill for medically necessary services. Program leaders and program participants aspire to be involved in decision making about patient care. One might deliberate whether combining study participants with job categories related to diabetes program and behavioral health program could have contributed to system integration efforts. Currently referrals and warm handoffs are more successful and easier. The consideration of an interprofessional team training provides a theoretical framework for further research on whether interprofessional training promotes system integration.

**Alternative Explanations of Results**

The lack of clinical significance in the pre- and post-training Level of Integrated Measure can be explained by the mere presumption that the training raised the participants’ awareness and interest in this topic. The Level of Integrated Measure is a tool that reflects the providers and
employees perspectives of integration. This study measured the beliefs and commitment in integrated care and is the only psychometric instrument to assess behavioral health integration in primary care. The participants scores were high pre- and post-training and dropped with no conclusive explanation to support the hypothesis regarding their perspectives of integration. It is the researcher’s observation that same day pre and post measures do not lend itself to causative changes in attitudes. Rather, change is gradual and information is integrated and understood over time. Prior to this training, the diabetes program and behavioral health programs were not sufficiently designed to demonstrate that it was a superior form of care with the existing siloed programming and minimal collaboration where diabetes and behavioral health programs have minimal communications and where both conditions are being treated separately.

Another alternative explanation of the results is in the instrument itself. The Level of Integrated Measure (LIM) instrument was not a measure of how well the participants understood the training to effect a change in scores. Rather, participants questioned and judged their own program’s structure, integrity and practice skills related to integration.

**Study Strengths and Limitations**

The benefits of including participants of both the diabetes program and behavioral health program into the study is significant as participants understood the value of bi-directional integration. The strength of this study was evidenced by the consistent participation in training attendance and data collection for pre- and post-training. Only two participants did not complete the post training survey. A six-week post follow up study yielded strong consistent participation by all 15 participants of the original study. There was no difference in responses by gender, age or ethnicity and results were consistently represented.

The training on integrated care addressed the following topics: whole person care, health behavior as it relates to diabetes condition, patient engagement and activation strategies and team-based collaborative care. The training modules used a range of didactic, video and group
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participation that reinforced the learning objectives on integrated healthcare through active participation and role play exercises. The researcher engaged in participatory research to better understand the participants’ culture and traditional values and to demonstrate good engagement and delivery skills throughout the study. The researcher was mindful about adopting learning theories, learning styles, and behavior change theories as applied to behavior reinforcement strategies in training methods.

The most evident limitation to the study is the fact that results of the pre and post-training measures on the LIM did not have clinical or statistical significance in support of the hypotheses that integrated healthcare training results in the program being committed to integrated care, nor did it support the hypothesis that employees perceive that integrated care is a superior form of patient care. Additional limitations included a small sample size and not employing a randomized clinical trial study or most evidence-based research. Researcher bias could be a factor in the manner the researcher delivered the training intervention. Adopting dual roles, one of teacher and the other as researcher may lend itself to some personal subjectivity while delivering theoretical knowledge related to empathy, compassion and stress. Bias could also have been introduced through the post follow-up instrument questions designed by the researcher and the use of participatory method and interviewing style in qualitative research. The instrument was not tested for validity and reliability due to small sample size. This topic is extensive, requires practice skills and coaching and needs to be delivered over time. Hence, the results of this analysis provide some general insight regarding minimizing bias by staying neutral in the data gathering phase and being aware of dominant responder bias and moderating the time provided to different participants. Pre- and post-test were administered on the same day of the training on integrated health care which had the effect of a heightened awareness and expanded their knowledge base about healthcare integration concepts, stimulated reflective participant practice skills and challenged current program delivery strategies. Although participants may have emerged from the training with sound theoretical knowledge, the
time required to internalize the subject matter and practice these skills may have limited bearing on their post-training responses to the LIM. The research design limited the program participants from formalizing integrated healthcare practices into their direct services to significantly affect their belief that the program was committed to this practice nor support evidence that integrated health care practice is a superior form of patient care as evidenced by patient outcomes. Participants may have been at various stages of change in their beliefs and health delivery practices or in their skills on patient engagement to impact health behavior change.

However, the study did raise the level of participation, interest and awareness on integrated care practices. Training method simulated role playing to teach collaborative care concepts in healthcare. The above findings have significant implications and one might infer that participants’ have a greater understanding of the need to collaborate and deliver behavioral health integration into the diabetes program to increase patient engagement skills and to deliver health care practices that are effective and produce cost benefits and efficiency. The six-week follow up study and the use of the researcher’s integrated healthcare questionnaire reflected increased agreements that integrated care improves patient engagement, participant’s confidence in practice skills, and better program redesign. The results support best practices in the healthcare field to impact organizational change.

**Implications of the Findings**

In terms of this study generalizing to other similar participant population is not conclusive. This training intervention could merit further refinements based on the demographic characteristics of the participants. This study was a pilot study and will provide direction on organizational integration in tribal systems. A post evaluation at intervals of 3 to 6 months may be beneficial as part of the continuous quality improvement to support behavioral health integration into the diabetes program as well as measure bi-directional integration to address medical management of health conditions with those seeking behavioral health services.
ADVANCING BEHAVIORAL HEALTH INTEGRATION

This study was presented at the 2016 National Tribal Public Health Summit. The researcher presented the findings of this study in a poster session in early April and had the opportunity to deliberate with other tribal agencies and tribal governments on this subject, discuss policies that guide and drive integrated practices to meet with the mandates of the Affordable Care Act (2010). The poster was well received for the Phoenix area diabetes consultant to propose inviting the researcher to present at their webinar for the Special Diabetes for Indians Program and funding to support training. The Indian Health Service Division of Diabetes, Public Health Accreditation and CDC viewed this as an innovative attempt at introducing behavioral health integration into the Diabetes and other chronic conditions. This study implies that workforce investment has the advantage of improving the delivery of public health service. Training and building workforce capacity makes a compelling case for the future of healthcare that delivers better health, better care and cost effectiveness. Evidence drawn from this study features significant conclusions regarding workforce training which will support the literature on best practices delivered in the area of integrated care. Trainings would need to support the conceptualization of program enhancements, such as patient activation methods, population health management strategies to demonstrate any changes in patient health outcomes, public health laws and governance.

This preliminary attempt by the tribal health department modestly exemplifies a continuous quality improvement project towards tribal public health accreditation. The researcher will consult and actively participate in population health management and performance management projects at the Health Directors’ forum at the tribal health department to advance integration efforts. In comparing the SAMHSA-HRSA Standard framework: Six levels of integration, the study experience has initiated collaboration between the diabetes and behavioral health programs on a continuum of integration. It is fair to infer from this data analysis that the study brought together participants from the two programs and assessed to be at a level 3 integration with basic collaboration in a co-located site. Participants expressed agreements regarding collaboration
between the diabetes program and behavioral health and have implemented bi-directional integration.

Tribal members value the involvement of the family. Programs that embrace traditional cultural practices and support family-centered interventions and programming is vital to community engagement. A system focused integration presents a new paradigm where innovation will bring attention to creative possibilities and programming. Data drawn from similar studies will assist with quality improvements to measure population health outcomes.

**Suggestions for Further Research**

The study limitation is reflective of small sample size of a small program in the health department. Expansion of the sample size in other health programs such as those addressing hepatitis C, HIV, substance dependence would yield data that is more representative of the native population. Pre-and post-training measures could factor in a longer time interval between assessments, which may yield better results once the training concepts have been well integrated and the participants have practiced their skills. There is limited research related to primary care behavioral health integration in community outreach programs and should target community health nurse practitioners who are active providers in the tribal health system to provide collaborative and team-based care to ensure that referrals and warm hand offs for specialized care is effective. Continued research and subsequent care adjustments are necessary, as poor diabetes management leads to more complex health conditions and drives the high cost of care and its impact on the community. Workforce training is an investment and can be cost-effective by addressing co-morbid chronic conditions concurrently. Training certifications would provide added bonus for reimbursement of medically necessary services.

Participants who had tribal affiliation, have an understanding of tribal culture, traditions and culturally linguistic and appropriate services and are motivated to dispel health inequities. Yet study participants with non-behavioral health backgrounds expressed discomfort with addressing
behavioral health issues that was outside their scope of their practice and training. Participants demonstrated an understanding about the social determinants and barriers to health care especially skills needed to engage tribal members in accessing these services. They identified health beliefs of tribal members that are contrary to any positive health behavior change due to their cultural beliefs about health and their reticence to seeking healthcare. Elderly tribal members often live without seeking routine health screenings and may practice alternative medicine. Future trainings are necessary to provide continuous support and education about how to address behavioral health issues and how to make referrals. The curriculum may need to address and consider tribal health beliefs that focus on changing negative health behaviors.
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ADVANCING BEHAVIORAL HEALTH INTEGRATION


## Level of Integration Measure (LIM)

Provide ID#: ________________________  Date: ________________________

For each item below, circle the number to the right that best reflects your level of agreement with each item regarding the primary care clinic in which you work. Please do not leave any question blank and mark only one response to each question. Thank you.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>1</td>
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<tr>
<td>6.</td>
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<td>5</td>
</tr>
<tr>
<td>7.</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

(More items on reverse side)
<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In our clinic, PCPs and BHSs regularly review each other’s notes in patient charts or the EMR.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>PCPs and BHSs do “warm hand-off” according to patient needs.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>PCPs and BHSs regularly consult about patient care in our clinic.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The BHSs take part in clinic meetings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The BHSs are readily available to see patients and consult with PCPs in the clinic.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>PCPs and BHSs collaborate in making decisions about mutual patients in the clinic.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BHSs and PCPs approach patient care with a sense of partnership and shared decision-making.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>PCPs are ultimately responsible for all patient behavioral health care in our clinic.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The BHSs and PCPs have equal authority in determining patient care for mutual patients.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The PCPs and BHSs have regular, positive interactions in our clinic.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The BHSs and PCPs trust each other.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The BHSs and PCPs respect each other.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The BHSs and PCPs work comfortably together.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The BHSs and PCPs provide training for each other and the rest of the clinic staff.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The BHSs and PCPs attend trainings together.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The BHSs and PCPs learn from each other.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>All clinic staff receives integrated care training.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Our clinic has at least one integrated care “champion.”</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The clinic administrator(s) value integrated care.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The clinic administrator(s) &quot;go to bat&quot; for integrated care.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
The Levels of Integrated Measure was developed by Fauth, Tremblay, Blanchard, & Austin, (2010) to rate the degree of integration to which behavioral health is integrated into primary care settings from the perspective of staff and/or providers.

### Appendix B: Integrated Care Questionnaire

**Integrated HealthCare Questionnaire**

<table>
<thead>
<tr>
<th>Provider ID# __________________________</th>
<th>Date __________________________</th>
</tr>
</thead>
</table>

For each item below circle the number to the right that best reflects your level of agreement with each item regarding the primary care clinic in which you work. Please do not leave any question blank and mark only one response to each question. Thank you.

<table>
<thead>
<tr>
<th>Item</th>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Does your knowledge of integrated healthcare transform the way you provide care?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Has your integrated care practices improved since the training and education?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Does the SDPI integrated clinic able to increase and sustain membership enrollment?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Would you be willing to get certified in integrated care so that you could bill for medically necessary services?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Do you think that a multidisciplinary team decision promotes integrated care?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Is integrated care better than the care currently being provided?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Are patients are more engaged in their health behaviors when provided with integrated care?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Does education about medical conditions and stress related to these conditions changes health behaviors?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Does healthy habits such as diet and fitness exercise change health behaviors?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>Do attendance at support groups change health behaviors?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Integrated Healthcare Questionnaire: Tham, DBH Management Track, 2015.
## Appendix C 1: Six Levels of Collaboration

<table>
<thead>
<tr>
<th>COORDINATED KEY ELEMENT: COMMUNICATION</th>
<th>CO-LOCATED KEY ELEMENT: PHYSICAL PROXIMITY</th>
<th>INTEGRATED KEY ELEMENT: PRACTICE CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LEVEL 1</strong> Minimal Collaboration</td>
<td><strong>LEVEL 2</strong> Basic Collaboration at a Distance</td>
<td><strong>LEVEL 3</strong> Close Collaboration Onsite with Some System Integration</td>
</tr>
<tr>
<td>In separate facilities, where they:</td>
<td>In separate facilities, where they:</td>
<td>In same space within the same facility, where they:</td>
</tr>
<tr>
<td>➤ Have separate systems</td>
<td>➤ Have separate systems</td>
<td>➤ Have resolved most or all system issues, functioning as one integrated system</td>
</tr>
<tr>
<td>➤ Communicate about cases only rarely and under competing circumstances</td>
<td>➤ Communicate regularly about shared patients, by phone or e-mail</td>
<td>➤ Communicate consistently at the system, team and individual levels</td>
</tr>
<tr>
<td>➤ Collaborate, driven by need for each other’s services and more reliable referral</td>
<td>➤ Collaborate, driven by need for consultation and coordinated plans for difficult patients</td>
<td>➤ Collaborate, driven by desire to be a member of the care team</td>
</tr>
<tr>
<td>➤ May never meet in person</td>
<td>➤ Have regular face-to-face interactions about some patients</td>
<td>➤ Have regular team meetings to discuss overall patients care and specific patient issues</td>
</tr>
<tr>
<td>➤ Have limited understanding of each other’s roles</td>
<td>➤ Have a basic understanding of roles and culture</td>
<td>➤ Have roles and cultures that blur or blend</td>
</tr>
</tbody>
</table>

| LEVEL 4 Close Collaboration Approaching an Integrated Practice |
| In same space within the same facility (some shared space), where they: |
| ➤ Share some systems, like scheduling or medical records |
| ➤ Communicate in person as needed |
| ➤ Collaborate, driven by need for consultation and coordinated plans for difficult patients |
| ➤ Have regular face-to-face interactions about some patients |
| ➤ Have a basic understanding of roles and culture |

| LEVEL 5 Full Collaboration In a Transformed/Merged Integrated Practice |
| In same space within the same facility, sharing all practice space, where they: |
| ➤ Actively seek system solutions together or develop work-arounds |
| ➤ Communicate frequently in person |
| ➤ Collaborate, driven by desire to be a member of the care team |
| ➤ Have regular team meetings to discuss overall patients care and specific patient issues |
| ➤ Have roles and cultures that blur or blend |

---

Appendix C 2 Six Levels of Collaboration

<table>
<thead>
<tr>
<th>Level</th>
<th>CO-LOCATED</th>
<th>INTEGRATED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Minimal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>2. Basic Collaboration</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>at a Distance</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>3. Basic Collaboration</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Online with Some System</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Integration</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>4. Close Collaboration</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approaching an Integrated Practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>5. Full Collaboration as a Transformed/ Merged Integrated Practice</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Key Differentiators: Practice/Organization

<table>
<thead>
<tr>
<th><strong>Level 1</strong></th>
<th><strong>Level 2</strong></th>
<th><strong>Level 3</strong></th>
<th><strong>Level 4</strong></th>
<th><strong>Level 5</strong></th>
<th><strong>Level 6</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>No coordination or management of collaborative efforts</td>
<td>Some practice leadership is more systematic information sharing</td>
<td>Organization leaders supportive but often collaboration is viewed as a project or program</td>
<td>Organization leaders support integration through mutual problem-solving of some system barriers</td>
<td>Organization leaders support integration, if funding allows and efforts placed on solving as many system issues as possible, without changing fundamentally how disciplines are practiced</td>
<td>Organization leaders strongly support integration as practice model with expected change in service delivery, and resources provided for development</td>
</tr>
<tr>
<td>Little provider buy-in to integration or even collaboration, up to individual providers to include as time and practice limits allow</td>
<td>Some provider buy-in to collaboration and value placed on having needed information</td>
<td>Provider buy-in to making referrals work and appreciation of onsite availability</td>
<td>More buy-in to concept of integration but not consistent across providers, not all providers using opportunities for integration or components</td>
<td>Nearly all providers engaged in integrated model. Buy-in may not include change in practice strategy for individual providers</td>
<td>Integrated care and all components embraced by all providers and active involvement in practice change</td>
</tr>
</tbody>
</table>

### Key Differentiators: Business Model

<table>
<thead>
<tr>
<th><strong>Level 1</strong></th>
<th><strong>Level 2</strong></th>
<th><strong>Level 3</strong></th>
<th><strong>Level 4</strong></th>
<th><strong>Level 5</strong></th>
<th><strong>Level 6</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate funding</td>
<td>Separate funding</td>
<td>Separate funding</td>
<td>Separate funding</td>
<td>Separate funding, but may share grants</td>
<td>Blended funding based on contracts, grants or agreements</td>
</tr>
<tr>
<td>No sharing of resources</td>
<td>May share resources for single projects</td>
<td>May share facility expenses</td>
<td>May share office expenses, staffing costs, or infrastructure</td>
<td>Blending of all expenses</td>
<td>Resources shared and allocated across whole practice</td>
</tr>
<tr>
<td>Separate billing practices</td>
<td>Separate billing practices</td>
<td>Separate billing practices</td>
<td>Separate billing due to system barriers</td>
<td>Billing function combined or agreed upon process</td>
<td>Billing maximized for integrated model and single billing structure</td>
</tr>
</tbody>
</table>

## Appendix C 3 Six Levels of Collaboration

<table>
<thead>
<tr>
<th>COORDINATED</th>
<th>CO-LOCATED</th>
<th>INTEGRATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL 1: Minimal Collaboration</td>
<td>LEVEL 2: Basic Collaboration at a Distance</td>
<td>LEVEL 3: Close Collaboration with Some System Integration</td>
</tr>
</tbody>
</table>

### Advantages

- **COORDINATED**
  - Each practice can make timely and autonomous decisions about care
  - Readily understood as a practice model by patients and providers

- **CO-LOCATED**
  - Maintains each practice's basic operating structure, so change is not a disruptive factor
  - Provides some coordination and information-sharing that is helpful to both patients and providers

- **INTEGRATED**
  - Colocation allows for more direct interaction and communication among professionals to impact patient care
  - Referrals more successful due to proximity
  - Opportunity to develop deeper professional relationships

- **COORDINATED**
  - Removal of some system barriers, like separate relocations, allows closer collaboration to occur
  - Both behavioral health and medical providers can become more well-informed about what each can provide
  - Patients are viewed as shared, which facilitates more complete treatment plans

- **CO-LOCATED**
  - High level of collaboration leads to more responsive patient care, improved engagement in and adherence to treatment plans
  - Provider flexibility increases as system issues and barriers are resolved
  - Both provider and patient satisfaction may increase

- **INTEGRATED**
  - Opportunity to truly treat whole person
  - All or almost all system barriers resolved, allowing providers to practice as high functioning teams
  - All patient needs addressed as they occur
  - Shared knowledge base of providers increases and allows each professional to respond more broadly and adequately to any issue

### Weaknesses

- **COORDINATED**
  - Services may overlap, be duplicated or even work against each other
  - Important aspects of care may not be addressed or take a long time to be diagnosed

- **CO-LOCATED**
  - Sharing of information may not be systematic enough to affect overall patient care
  - No guarantee that information will change plan or strategy of each provider
  - Referrals may fail due to barriers, leading to patient and provider frustration

- **INTEGRATED**
  - Proximity may not lead to greater collaboration, limiting value
  - Effort is required to develop relationships
  - Limited flexibility, if traditional roles are maintained

- **COORDINATED**
  - System issues may limit collaboration
  - Potential for tension and conflicting agendas among providers as practice boundaries are tested

- **CO-LOCATED**
  - Practice changes may create lack of fit for some established providers
  - Time is needed to collaborate at this high level and may affect practice productivity or cadre of care

- **INTEGRATED**
  - Sustainability issues may stress the practice
  - Few models at this level with enough experience to support value
  - Outcome expectations not yet established

---

### Appendix C.4 Six Levels of Collaboration

<table>
<thead>
<tr>
<th>LEV. 1</th>
<th>LEV. 2</th>
<th>LEV. 3</th>
<th>LEV. 4</th>
<th>LEV. 5</th>
<th>LEV. 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal Collaboration</td>
<td>Basic Collaboration at a Distance</td>
<td>Basic Collaboration Onsite</td>
<td>Close Collaboration Onsite with Some System Integration</td>
<td>Close Collaboration Approaching an Integrated Practice</td>
<td>Full Collaboration in a Transformed/Merged Integrated Practice</td>
</tr>
</tbody>
</table>

#### Advantages

- Each practice can make timely and autonomous decisions about care
- Readily understood as a practice model by patients and providers
- Maintains each practice’s basic operating structure, so change is not a disruptive factor
- Provides some coordination and information sharing that is helpful to both patients and providers
- Colocation allows for more direct interaction and communication among professionals to impact patient care
- Referrals more successful due to proximity
- Opportunity to develop closer professional relationships
- Removal of some system barriers, like separate records, allows closer collaboration to occur
- Both behavioral health and medical providers can become more well-informed about what each can provide
- Patients are viewed as shared which facilitates more complete treatment plans
- High level of collaboration leads to more responsive patient care, increasing engagement and adherence to treatment plans
- Provider flexibility increases as system issues and barriers are resolved
- Both provider and patient satisfaction may increase
- Opportunity to truly treat whole person
- All or almost all system barriers resolved, allowing providers to practice as high functioning team
- All patient needs addressed as they occur
- Shared knowledge base of providers increases and allows each professional to respond more broadly and adequately to any issue

#### Weaknesses

- Services may overlap, be duplicated or even work against each other
- Important aspects of care may not be addressed or take a long time to be diagnosed
- Sharing of information may not be systematic enough to effect overall patient care
- No guarantee that information will change plan or strategy of each provider
- Referrals may fail due to barriers, leading to patient and provider frustration
- Proximity may not lead to greater collaboration, limiting value
- Effort is required to develop relationships
- System issues may limit collaboration
- Potential for tension and conflicting agendas among providers as practice boundaries loosen
- Practice changes may create lack of fit for some established providers
- Time is needed to collaborate at this high level and may affect practice productivity or cadence of care
- Sustainability issues may stress the practice
- Few models at this level with enough experience to support value
- Outcome expectations not yet established

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The Standard Framework for Levels of Integrated Healthcare was developed by Doherty, McDaniel, Baird (1995, 1996) and funded by the SAMHSA-HRSA Center for Integrated Health Solutions (2013) to promote the development of integrated primary and behavioral health services to better address the needs of individuals with mental health and substance use conditions.
Table 5. Table of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI/AN</td>
<td>American Indians / Alaskan Natives</td>
</tr>
<tr>
<td>BH</td>
<td>Behavioral Health</td>
</tr>
<tr>
<td>CCM</td>
<td>Collaborative Care Model</td>
</tr>
<tr>
<td>CCCM</td>
<td>Coordinated Chronic Care Management</td>
</tr>
<tr>
<td>CDC</td>
<td>Centers for Disease Control</td>
</tr>
<tr>
<td>HHS</td>
<td>Health and Human Services</td>
</tr>
<tr>
<td>IOM</td>
<td>Institute of Medicine</td>
</tr>
<tr>
<td>LIM</td>
<td>Levels of Integrated Measure</td>
</tr>
<tr>
<td>NA</td>
<td>Native American</td>
</tr>
<tr>
<td>NIH</td>
<td>National Institute of Health</td>
</tr>
<tr>
<td>PYT</td>
<td>Pascua Yaqui Tribe</td>
</tr>
<tr>
<td>RBHA</td>
<td>Regional Behavioral Health Authority</td>
</tr>
<tr>
<td>SAMHSA</td>
<td>Substance Abuse Mental Health Services Administration</td>
</tr>
<tr>
<td>SDPI</td>
<td>Special Diabetes Program for Indians</td>
</tr>
<tr>
<td>T/RBHA</td>
<td>Tribal / Regional Behavioral Health Authority</td>
</tr>
</tbody>
</table>

Competing Interests

The author declares that she has no competing interests other than desire to complete the research as part of the course credit for the Doctor of Behavioral Health studies.