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Historical Development of the Psycho-lexical Approach in Understanding Personality: A Narrative Review

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The Psycho-lexical approach has played a pivotal role in advancing our understanding of personality traits within Personality Psychology. It has facilitated the development of a scientific taxonomy, contributing to a consensus in the field. One of the ground-breaking works using the Psycho-lexical approach is the formulation of the Big Five broad personality dimensions. This contribution has been replicated by researchers across diverse contexts. While some studies have successfully validated the presence of the Big Five dimensions, others have revealed culturally specific personality dimensions. The objective of this paper is to delve into the historical development of the Psycho-lexical approach for understanding personality structure. A narrative review was conducted to combine results from various studies on Psycho-lexical approach. Results indicate the cross-validation of the Big Five personality dimensions in both Indo-European and Non-Indo-European languages. The paper concludes by highlighting research gaps and future directions in Psycho-lexical studies.

Keywords: Big Five traits, Culture, Languages, Personality, Psycho-lexical

The commonly observed behavioral and personality traits from society get encoded in the interpersonal language via words and phrases (White, 1980). Thus, the native language employed in human interactions may promote certain personality concepts over others. For instance, Oishi et al. (2013) found that over the last centuries the phrase "person nation" has been used more frequently in American English than the "happy nation". This linguistic shift contributed to the promotion of individualism among contemporary Americans (Twenge et al., 2012). Learning about the structure of language will provide a window into the significance of prominent personality traits within a given community. This understanding magnifies how language both moulds and reflects the psychological attributes of its speakers. This concept emerges from the interdisciplinary field of Psycholinguistics, which amalgamates the areas of language and psychology (Altman, 2001).

Researchers such as Goldberg pioneered the Psycho-lexical approach as a methodology to dissect personality descriptors by analyzing words and phrases. The Psycho-lexical approach explores personality differences by analyzing words from different cultures and languages (Triandis, 1978). Goldberg's Psycho-lexical study in the English language concluded with the presence of a five-dimensional structure known as the Big Five broad Personality dimensions of Intellect/Imagination, Conscientiousness, Extraversion, Agreeableness and Emotional stability (Goldberg, 1992). The replication of these Big Five dimensions was subsequently confirmed through testing in other Germanic languages, Dutch by De Raad (1992) and German by Ostendorf (1990). However,

Dutch language, the fifth factor, combined intellect facets with progressiveness and study in German language replicated Big-Five with Intellect factor.Following these investigations in Germanic languages, similar Psycho-lexical studies were conducted in various other Indo-European languages. Studies emerged in non-Indo-European languages such as Khoekhoe (Thalmayer et al., 2021) and Vietnamese (Mai & Church, 2023).

Studies within psycho-lexical approach aim to formulate a linguistic taxonomy of personality traits by analysing how individuals allocate these traits to themselves and others (Saucier & Goldberg, 2001). The typical outline of studies follows source identification, filtering, culling, categorization and reduction of traits in order (Saucier & Goldberg, 2001). Though there exist discrepancies in the methodologies employed by different researchers, this adds as an inherent limitation to Psycho- lexical studies (De Raad, 1992).

The current paper attempts to deliver a historical overview of the psycho-lexical approach to understanding personality through a narrative review. Hence, review is structured around the following objectives:

1. To trace the historical development of Psycho-lexical approach in Personality Psychology.
2. To investigate the cross-cultural validation of the Big Five personality traits across Psycho-lexical studies.
3. To identify research gaps within the Psycho-lexical studies.
4. To conclude by offering insights into the future scope of personality taxonomy.

Method

This paper applied narrative review to analyze and consolidate existing literature. Studies have been collected from online databases (e.g. Google scholar, PubMed central, Researchgate) by using the keywords such as “Psycho-lexical”, “Big-five”, “Big-seven”, “personality” and “taxonomy”. The inclusion criteria for the selection of studies are as follows:

1. Studies must focus on building the Big Five personality dimensions.
2. Selected studies need to be published in the English language.
3. Studies are sourced from indexed journals, to ensure a level of quality in the research sources.

Results

The findings from reviewed literature highlight themes related to Psycho-lexical approach in understanding personality. The analysis revealed that historical development can be divided into two major themes i.e. Early development of psycho-lexical approach and Application of Personality Traits Across Cultures and Emerging Taxonomic Models.

Early development of psycho-lexical approach.

Sir. Francis Galton (1884) was one of the first researchers to explore dictionaries to gather around 1000 personality descriptors (Gillham, 2001). Due to unsystematic work by Galton and other early researchers, their contributions had limited impact on the field (John et al., 1988).

In 1926, Klages emerged as a true pioneer in this field. Klages (1926) argued that studying a language would benefit understanding of human personality. Building upon Klages’ argument, Baumgarten (1933) assembled around 941 trait-descriptors adjectives and 688 nouns from German literature (John et al., 1988). This work by Baumgarten significantly influenced Allport and Odbert, who went on to construct their

own taxonomy of personality traits (John et al., 1988).

Allport and Odbert (1936) aimed to distinguish between the behavioural traits. They reviewed 55,000 words from Webster's New International dictionary and categorized words into four columns. The three independent judges collectively organized the words into four distinct categories:

1. Column I: 4,504 neutral terms for potential traits (e.g., aggressive, introverted).
2. Column II: 4,541 terms for moods or activities (e.g., abashed, rejoicing).
3. Column III: 5,226 terms reflecting social or attributional judgments (e.g., insignificant, dazzling).
4. Column IV: 3,682 miscellaneous terms, including capacities (e.g., gifted), physical qualities (e.g., blue-eyed), and ambiguous terms.

This effort advanced the understanding of personality traits. A major limitation was the potential bias introduced by the three judges (John et al., 1988).

Building upon Allport and Odbert work, Cattell (1943) compiled a comprehensive list of personality descriptive terms from psychological publications. By reviewing 12 rating studies, he identified 131 trait clusters. He tried all possible pairwise comparisons among these clusters to combine overlapping clusters. Total of 42 variables were identified and arranged in bipolar form. These were then subjected to factor analysis, resulting in the identification of 12 obliquely rotated factors. Subsequent re-analysis suggested that only the first three to five factors were interpretable and replicable (Cattell, 1943).

Support for the five dimensions of personality.

Research conducted by Fiske (1949), Tupes, and Christal (1961) provided substantial support for the existence of five dimensions of personality. This aligned with Cattell's trait selection (Cattell, 1943). However, Cattell's approach faced criticism around potential bias in the selection of traits. The insufficient focus on the critical details necessary to ensure the reproducibility of findings was also criticised (John et al., 1988).

Tupes and Christal (1961) re-evaluated the correlation matrices obtained from eight distinct cohorts with multiple judges. Across all their analyses, the presence of five distinct words was discovered. These factors were labeled as follows:

(I) Surgency: talkativeness, assertiveness, and energy;

(II) Agreeableness: being good-natured, cooperative, and trustworthy;

(III) Dependability: conscientiousness, responsibility, and orderliness;

(IV) Emotional Stability: calmness, lack of neuroticism, and resistance to agitation

(V) Culture: intellectualism, cultured behavior, polish, and independent thinking.

Remarkably, these factors bore a striking resemblance to the initial five factors identified in Cattell's research. Though Cattell had featured two separate Emotional Stability factors. This five-factor structure proposed by Tupes and Christal gained further support from subsequent researchers.

Around 1967, Norman addressed the limitations of Cattell's work. He started anew by pinpointing words that aligned with his specification of personality description (John et al., 1988). He identified terms in Webster's Third New International Dictionary that attribute to behavior and person (Norman, 1967). He sorted 1,600 trait-descriptive terms into 10 broad classes by aligning with the two poles of each of the Big Five personality dimensions (Openness,

Conscientiousness, Extraversion, Agreeableness, and Neuroticism). The Big Five dimensions did not have equally large domains of English trait descriptors as the number of terms varied (Norman, 1967). Distribution of terms were uneven, reflecting that some personality traits are described by more words in the English language than others. The Disagreeableness pole of Factor I(Agreeableness) had 274 terms, while the Neuroticism pole of Factor IV had only 64 terms (Norman, 1967).

Norman sorted terms within the 10 factor poles to a narrower 75 middle-level. Within the 75 categories, he examined the semantic relations and grouped synonymous terms into 571 synonym sets. This hierarchical structure consisting of 1,431 adjectives and 175 nouns provided a balance between broad, undifferentiated levels and highly specific synonym sets (Norman, 1967). This structure helped in understanding the Big Five dimensions by elaborating on wider categories like Grace, Vanity, Sophistication (Norman, 1967).

Digman's work in the 1980s that helped clarify the five broad dimensions of personality. He analyzed data from a variety of sources such as personality questionnaires, peer ratings, and observer ratings (Digman, 1997). His work extended beyond empirical validation; he also explored the theoretical implications of the Big Five (Digman, 1997). This discussion helped to integrate the Big Five model into the broader scope of personality research, enhancing its theoretical depth (Digman, 1997).

Digman also suggested two broader dimensions known as Alpha and Beta, suggesting that the Big Five could be part of a more interconnected framework of human personality (Digman, 1997). Digman's contributions were crucial in setting the stage for later work by researchers like Goldberg, as they provided a robust framework for understanding and assessing personality traits.

Goldberg's work on big five personality traits.

Goldberg's work on taxonomies led to the development of comprehensive taxonomies of personality trait descriptors (Peimont & Aycock, 2007). Following lexical approach, Goldberg employed a sorting algorithm to develop trait taxonomies (Goldberg, 1992). His algorithm was partially based on Peabody's work in distinguishing connotative and denotative components in the meanings of trait adjectives (Peabody & De Raad, 2002). Moreover, due to the onset of software technology, Goldberg was systematically able to factor analyze more than 100-150 trait adjectives at a time. He was able to formulate clusters to reduce the number of variables. Thus, Goldberg aimed to create a comprehensive and structured taxonomy (Goldberg, 1992).

His major contributions to trait taxonomies is the development of the Big Five personality traits consisting of I: Intellect/Imagination, II: Conscientiousness, III: Extraveqrsion, IV: Agreeableness and V: Emotional stability (Goldberg, 1992).The research supported the robustness of these five traits across different languages and cultures (Goldberg, 1992). Goldberg (1992) used Roman numerals (I–V) to denote the five basic dimensions of personality, with their meanings determined by factor analysis loadings. Factor I had the strongest loadings, representing the largest linguistic domain, while Factor V represents the smallest. Additionally, Goldberg developed taxonomies for interpersonal behavior, offering a framework to integrate and distinguish different models (Goldberg, 1992).

The Big Five model is developed and followed by the Five- Factor Model of Personality. The Five-factor model of Personality is developed in the tradition of

questionnaire-based research. In the lexical tradition, the Big Five is considered as a model of personality traits that represents the broad dimensions of personality (McCrae & Costa, 2004). These traits are valuable for capturing the fundamental aspects of human personality and recognizing individual differences in behavior, thoughts, and emotions. The Big Five stands as one of the most widely accepted and empirically supported models in personality psychology (McCrae & Costa, 2004) as it offers a parsimonious and organized way to categorize and measure individual differences in personality traits (Goldberg, 1992).

The universality of the Big Five in capturing a broad spectrum of personality traits continues to be examined, along with its cross-cultural implications (Srivastava & John, 1999). To test the same, most researchers utilize the Big Five markers to categorize and analyze personality traits expressed in natural language (Saucier, 2009).

Table 1: *Denoted the chronological progress in Psycho-lexical approach*

Year	Researcher	Significant development
1884	Sir. Francis Galton	First researchers to use a dictionary to scan 1000 personality descriptors.
1926	Ludwing Klages	Klages argued that study of language would benefit understanding of personality. He speculated that there are around 4000 german words to describe 'inner states'.
1933	Franziska Baumgarten	Baumgarten provided systematic study to examine Klages's speculation. He assembled words from various dictionaries and publications.Baumgarten's list showed 941 trait-descriptive adjectives and 688 nouns in German language. This number is considerably lower than that estimated by Klages.
1937	Gordon Allport and Henry Odbert	Allport and Odbert classified words into 4 columns. Their listing of words included uncommon and derivative word forms.
1943	Raymond Cattell	Cattell compiled studies and identified 131 trait clusters. comprehensive list of personality descriptive terms from psychological publications. He tried all possible pairwise comparisons among these clusters in order to combine those clusters that overlapped. After factor analyzing, he identified 12 obliquely rotated factors. Cattell's work laid the foundation for developing his comprehensive trait taxonomy.
1961	Ernest Tupes and Raymond Chrisal	Tupes and Chrisal analyzed correlation matrices and found Five relatively robust and recurrent factors. They labelled their factors (I) Surgency (talkative, assertive, energetic), (II) Agreeable- ness (good-natured, cooperative, trustful), (III) Dependability (conscientious, responsible, orderly), (IV) Emotional Stability (calm, not neurotic, not easily upset), and (V) Culture (intellectual cultured, polished,independent-minded). These factors are similar to the first five in Cattell's work.
1967	Warren Norman	Norman (1963) initiated his work by selecting a smaller set of 20 variables from Cattell's collection, which effectively represented the fundamental aspects of the Big Five. In constructing his subsequent hierarchical system, Norman included a wide array of trait descriptions he had formulated using the dictionary. Consequently, Norman's hierarchical arrangement is constrained at its uppermost tier by a choice from the limited variables in Cattell's set, while it encompasses an all-encompassing assortment of trait descriptors grouped according to their semantic resemblance at its most lower level.

1980	Lewis Goldberg	Goldberg investigated the multidimensional arrangement of adjectival terms extracted from Norman's previous lexical studies. This significant contribution indicated that the adjectives taken from the lexicon's sample could reveal the presence of the "Big Five" factors in peer evaluations. five major dimensions: Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness.
1985	Paul Costa and Robert McCrea	The original NEO-PI (NEO Personality Inventory) was developed by Paul Costa and Robert McCrae. They introduced the NEO-PI as a questionnaire designed to assess personality traits based on the Five-Factor Model (FFM) of personality. This model proposes that personality can be described and understood through five major dimensions. The NEO-PI aimed to measure these five factors comprehensively and provide a reliable and valid assessment of an individual's personality traits.
1992	Willem Hofstee and Frank Brokken	Investigations into the lexical hypothesis, carried out in partnership with Goldberg, proposed that this structure could be visualized as a collection of circular patterns within a five-dimensional space.
2000	Michael C. Ashton and Kibeom Lee	Used Psycho-lexical approach to produce HEXACO Personality inventory.

Application of personality traits across cultures and emerging taxonomic models.

During lexical hypothesis testing, if trait terms are strongly correlated with other terms, then there is higher relational impact between the traits (Wood, 2015). Hence beyond well-established five personality traits, support for personality taxonomy with fewer or more traits is found. Musek (2007) introduced the concept of "Big One", representing a single unrotated factor. This single and two factor structures support universal status because they have greater invariance across lexical studies (Saucier, 2009).

Support for the Big Two personality factors is extensive. Saucier et al. (2014) analyzed personality vocabularies across nine languages, including Chinese, Senoufo, Greek, and Maasai, revealing a parsimonious bivariate model: Social Self-Regulation and Dynamism. Social Self-Regulation encompasses Agreeableness, Honesty, and aspects of Emotional Stability and Conscientiousness, while Dynamism includes Extraversion, Intellect, and parts of Conscientiousness and Emotional Stability. Similarly, De Raad et al. (2018) found consistent Big Two dimensions across 11 linguistic taxonomies, demonstrating their cross-cultural robustness. These higher-order factors help integrate diverse theoretical models, with the Big Five dimensions shown to depend on these two overarching traits (Saucier et al., 2014). Furthermore, the universality of two or three broad dimensions has proven greater than models with five or six factors (De Raad et al., 2018). The Big Five dimensions were found to be dependent on the underlying two higher-order factors (Saucier et al., 2014). The Influence of the big two or three has gained more remarkable universality over five or six factors and has better replicated across cultures than models with five or six dimensions (De Raad et al., 2018).

Some studies e.g. Italian personality taxonomy (Di Blas & Forzi, 1999) reflected on the Big three dimensions i.e. Extraversion, Agreeableness and Conscientiousness which were more stable than the Big Five. Results from 11 lexical studies denote the presence of three dimensions of Affiliation (a version of Agreeableness), Dynamism (a version of

Extraversion), and Order (a version of Conscientiousness) (De Raad et al., 2018). Comparative study across languages including Polish, Dutch, Roman, Hungarian, Triesten and Czech showed that Factor III (Conscientiousness) was generally consistent across languages (Peabody & De Raad, 2018). Additionally, Non- Germanic languages such as Albanian proved presence for Big three factors: 1. expressing morality and discipline 2. confidence, energy, and being successful 3. sharp, rational, quick- witted (Shala et al., 2020).

In a lexical study of the Hindi language, Big Three factors aligned with the ancient Indian system of thinking about personality known as "*Triguna*" (Singh et al., 2016). Findings shows three broad factors consisting of 1. *rajasic* incorporates passion, 2. *tamasic* incorporates concealment and 3. *sattvic* incorporates truthfulness (Singh et al., 2013). This indicates divergence from the Big three from Germanic languages.*Triguna,* correlated with transactional analysis (Sandhya & Vinodkumar, 2021) includes factors like *rajasic* (passion), *tamasic* (concealment), and *sattvic* (truthfulness). Giridhar et al. (2022) claimed that *triguna* helps in maintaining balance in life.

De Raad et al. (1997) found evidence for the presence of the fourth factor among languages such as Dutch, Hungarian and Italian. Factor analysis of Korean personality trait adjectives resulted in four factors that strongly correlated with the first four factors of the Big Five (Hahn et al.,1999).

Goldberg (1992) emphasized the importance of testing the Big Five traits across cultures and languages. Hofstee et al. (1997) found the Big Five to occur relatively, not absolutely, with Factor V replicating only when ability terms were included, as seen in German and English datasets. Peabody and De Raad (2002) confirmed cross-linguistic consistency, though Factors IV (Emotional Stability) and V (Intellect) were less reliable. Wood (2015) highlighted the predictive value of trait loadings on relational impact. Meanwhile, Benet-Martinez & Waller (1997) observed limited cultural variations in a Spanish Big Five adaptation. Lexical studies extended the Big Five framework across Indo-European languages like Russian, Italian, Polish, Spanish, and French, as well as non-Indo-European languages like Japanese, Hebrew, Filipino, and Korean. Some, such as Almagor et al. (1995) and De Raad et al. (2018), identified variations, with traits like Collectivism in South Africa (Laher, 2013) or temperamental dimensions in Filipino representing blends of Agreeableness, Conscientiousness, and Neuroticism. Cross-cultural studies, including NEO-PI-R assessments, confirmed the Big Five's reliability (Soto & John, 2009), though dimensions like Agreeableness and Emotional Stability occasionally merged (Caprara & Perugini, 1994). Variations in data sources and aggregation methods influenced the orthogonality and correlations among traits (Warr et al., 2005; Biesanz & West, 2004), reflecting the dynamic interplay between universal and culture-specific personality structures.

The need for more than five arises when researchers reported insufficiency of the Big Five model in capturing a comprehensive model of personality (Feher & Vernon, 2021). Thus, alternative models such as the psychobiological model of the HEXACO and the Supernumerary Personality Traits were suggested (Feher & Vernon, 2021).

Ashton et al. (2004) proposed a six-factor model including the Big Five factors and an additional dimension of Honesty-humility. This is also known as the HEXACO model Honesty- Humility (H), Emotionality (E), Extraversion (X), Agreeableness (A), Conscientiousness (C), and Openness (O). This finding was consistent in seven

languages: Italian, Korean, French, Dutch, Hungarian, German, and Polish. A six-factor solution was also reported in Hungarian (Szirmák & De Raad, 1994), Dutch (De Raad et al., 1997), Korean (Hahn et al., 1999), French (Boies et al., 2001), Roman Italian (Caprara & Perugini, 1994) and Triestian Italian (De Blas & Forzi, 1999). Peabody in 2002 reviewed six languages and found that the third factor of conscientiousness was found to be consistent across the languages. Arabic personality taxonomy replicated six-factor dimensions including Agreeableness/ Righteousness, Conscientiousness, Dominance, Emotional Stability, Morality, and Positive Emotionality. However, it did not replicate the Openness dimension from the Big Five. Similarly, Saucier (2009) reported the presence of six recurring factors that could have been generalized across languages and cultures.

Evidence for the Big Seven model was confirmed by Almagor et al. (1995). Digman was the first one to note the presence of seven factors (Goldberg, 1992). He reported the presence of two higher-order factors along with the Big Five model. With the Big Five and two other factors are Positive Valence (e.g., remarkable and extraordinary) and Negative Valence (e.g., evil and cruel) (Almagor et al., 1995) . Seven personality factors were supported by English (Benet-Martinez & Waller, 1997), Hebrew (Almagor et al., 1995) and Spanish (Benet-Martinez & Waller, 1997) languages. For an eight-dimensional structure, a Big Five with Virtue, Competence, and Hedonism was proposed (Bakan, 1966; Digman, 1997). Few studies proposed a 10-factor model with additional factors being Virtue, Competence, Hedonism, Violence and Fearlessness (De raad & Barelds, 2008).

Discussion

The psycho-lexical approach in personality psychology evolved through key milestones. Galton (1884) first explored personality descriptors in dictionaries, followed by Klages (1926) and Baumgarten (1933), who emphasized language-based personality study. Allport & Odbert (1936) categorized 18,000 words into four groups, influencing Cattell (1943), who used factor analysis to identify 12 factors. Tupes & Christal (1961) later established the Big Five personality dimensions. Norman (1967), Digman (1980s), and Goldberg (1992) refined these traits, confirming the Big five model structure. The Big Five model has been cross-culturally validated, demonstrating stability across languages. McCrae & Costa (2004) confirmed its universality, though some traits vary by culture. Saucier (2009) and Srivastava & John (1999) found that collectivist cultures emphasize Agreeableness, while individualistic ones highlight Extraversion. Despite cultural nuances, the psycho-lexical approach remains a vital method for understanding personality, providing a comprehensive framework adaptable across diverse populations.

Limitations

One prominent criticism in the field of experimental psychology revolves around the common practice of using college students as participants to collect data (Kardes, 1996). This practice is observed in Psycho-lexical studies wherein university students are asked to rate personality descriptors. For instance, when constructing the taxonomy and structure of Croatian personality adjectives, researchers relied on students from University of Zagreb and collected 515 self-ratings, but also 513 peer-ratings with 509 matched self and peer ratings and both samples (Mlacic & Ostendorf, 2005). This practice raises concerns about the generalizability of findings. Considering a broader sample with older adults and an illiterate population would provide a different perspective (Kardes, 1996).

Many Psycho-lexical studies provide evidence for other factors apart from the Big Five. For instance, the Big Seven model consisting of Positive Valence and Negative Valence factors, verified the presence of factors beyond the Big Five (Simms & Watson, 2007). Likewise, many studies provide evidence for more or less than five broad dimensions. For example, researchers found evidence of the Big Three factors, i.e., *Rajasic*, *Tamasic* and *Sattvic* in the Hindi language among Indians (Singh et al., 2013). These findings challenge the notion that the Big Five is the ideal personality model. It proves that there cannot be a fixed number of dimensions to denote personality constructs.

Furthermore, there is a need for more standardization when selecting variables for taxonomies (Mai & Church, 2023). Saucier (2009) argued that instead of figuring out the exact number of factors, researchers must develop a standard method of selecting personality descriptors before making cross-cultural comparisons of personality dimensions. A standard method would unify the criteria for classifying adjectives as personality traits, and reliable classification of variables would enable control over variable selection (Saucier, 2009).

Another area for improvement between studies is the researchers' criteria for identifying personality-relevant terms. In Hungarian personality taxonomy, researchers have classified descriptive items based on word types, including adjectives, attribute nouns, and verbs (Szirmák & De Raad, 1994). Some researchers work with restricted sampling that focuses on stable traits, while others use unrestricted sampling by including all attributes such as physical attributes and temporary states. Church et al. (1998) stated that comprehensive taxonomy should include social and physical attributes.

Future Scope

According to Norm Chomsky (1965), natural language is an innate and powerful tool that enables humans to express thoughts, emotions, and ideas, making it a strong pillar of human society. Language enables sharing of learned resources, which is a part of educating the learners (Oliver et al., 2012). Education helps in formation of individual identity and facilitates personal growth. Along with this, at a larger level education aids the development of society (Vyas & Bano, 2015). In the field of Psychology, Psychoeducation is the educational component. Psychoeducation is a therapeutic approach that aims to impart information about the challenges and treatment of psychiatric illness (Bäuml et al., 2006). It is a combined approach of teaching about illness by tailoring to individual needs (Magill, 2021).

Findings from Psycho-lexical studies could be used to psycho-educate people about various psychological or mental health illnesses in their native languages.

Moreover, culture specific words would facilitate the programs conducted by community psychologists. Community psychologists undertake initiatives and conduct programs to improve the well-being of individuals and communities (Fryer, 2008). They preliminary work as participant conceptualizers (Fryer, 2008). Data from Psycho-lexical studies can help community psychologists cater to communities' specific needs.

Simultaneously, Psychologists could incorporate appropriate terms from local languages to provide culturally informed counseling services. For instance, Khwaileh et al. (2014) identified a set of culturally and linguistically appropriate concept labels for Levantine Arabic and explored the effects of psycholinguistic variables on lexical retrieval. Additionally, researchers can focus on rare

and taboo terminologies used in a particular culture to grasp what is accepted and unaccepted in their community (Hoeksema & Napoli, 2008). This will enrich knowledge about cultures. Furthermore, future studies could assess the familiarity and consistency of meanings of personality trait terms across different socioeconomic strata. This would involve determining if participants are familiar with the formal definitions of the terms and if there exists any informal but unpopular meaning of the same terms.

Most psychological tests and assessments are conducted in Western, educated, industrial, rich, democratic (W.E.I.R.D.) countries. Hence these assessments do not represent principles and cultural context of non-W.E.I.R.D. countries (Henrich et al., 2010). Thus, there is a need for culturally relevant inventories. Culturally relevant inventories consider the diverse backgrounds and experiences of individuals, ensuring that assessment tools are sensitive to cultural differences (Laher & Cockcroft, 2017). This promotes inclusivity and avoids biases that might arise from using assessments that are not culturally appropriate. It would be beneficial if data from Psycho-lexical studies were used to generate indigenous inventories (van de Vijver & Leung, 1997). This would make the tests and inventories available to non-English speaking and writing communities. For instance, Arabic Psycholinguistic Screening Tool was developed to evaluate phonological skills among 7 - 11 years old children (Aziz, 2012).

Psycho-lexical studies provide insights into the importance of cultural perceptions' dynamic and salient nature through words and phrases. These culturally relevant words and phrases could help design and develop speech agents, or AI-generated speech tools (Barrett et al., 2021). Thus, Psycho-lexical studies could be used in other disciplines along with psycholinguistics.

In summary, Psycho-lexical data holds the potential to enhance the comprehension of indigenous populations (Dauok-Oyry et al., 2016). Incorporating Psycho-lexical data, which provides insights into cultural perceptions, can enrich the understanding of the indigenous population. Importantly, this data allows us to represent minority populations often overlooked in Western psychological theories. While most lexical studies are conducted in the Indo- European family of languages, there is ample room for research in other language families such as Dravidian, Austroasiatic, Uralic, Afroasiatic, and Papuan. This will expand the field of psychology to a global perspective (Fernando & Mooley, 2018).

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