



Theoretical and Empirical base of Anxiety as an Instinct

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Abstract

This study aimed to address anxiety as an instinct from both theoretical and statistical perspectives. To this end the literature on anxiety was reviewed and its representative descriptions were subjected to schema theory and Chi-square analyses, respectively. By resorting to its macro-structure, the theory identifies the authorities on anxiety at the highest taxon of self as a schema while its micro-structure focuses on the authorities' words to find out which taxa of self they attribute anxiety to. To this end, Xi and Allah were chosen and Xi's words comprising her/his two cases, i.e., Model (M) case suffering from breast lumps and anxiety and Contrary (C) case suffering only from breast lumps, were subjected to Chi-square test. M case was found to be independent of C case though they both suffered from breast lumps. While Xi fails to address the independence of C case from M case, Allah, attributes it to the instinct of anxiety tackled differently by their self-theistic and polytheistic self, respectively. The results are discussed and suggestions are made for future research.

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Introduction

By resorting to schema theory Khodadady and Herriman argued that single words such as anxiety and patient in a text represent two different mental concepts or schemata, the plural of schema, in the brain of their users [1]. Anxiety, for example, consists of certain attributes which relate it to other schemata at various hierarchical levels called taxa, the plural of taxon. They further argued that the meaning of any schema is determined and should therefore be understood in its "interrelationships with the other schemata immediately surrounding it. In fact, these environmental schemata act as the attributes of the schema under comprehension".

Based on this micro-structural approach of schema theory (MICAST) Khodadady and Herriman hypothesized that “perfect reading comprehension will occur if, and only if, each and all of the schema presented by the author are comprehended” by his readers as the author does”.

Relating the readers’ comprehension of a text to the comprehension of its writer applies to all fields in general and health related fields such as medicine, nursing, psychiatry and psychology in particular. As texts Xi’s medical histories of model (M) and contrary (C) cases seem, for example, to be either written or accepted by her/him, an authority in nursing. Since the M and C cases represent the two patients with breast lumps, their readers must understand the texts, i.e., their constituting schemata, as Xi does so that they can tell whether each or both of them suffered from anxiety as well and why. According to Khodadady [3] and Khodadady and Herriman [1], two different types of tests are designed to measure the readers’ understanding of texts: traditional tests designed by the authorities of testing and schema-based tests designed by everyone including readers and healthcare providers/ professionals (HCPs).

The Test of English as a Foreign Language (TOEFL) is, for example, designed by authorities in order to measure English language proficiency (ELP). It is assumed to consist of structure and vocabulary knowledge and abilities such as reading comprehension. These authorities write not only the structure and vocabulary items but also the reading passages of the TOEFL themselves. For these reasons, the TOEFL is, according to Khodadady and Herriman, to, based on the macro-structural approach of schema theory (MACAST) because it derives its construct and content validities from authorities as does Minnesota Multiphasic Personality Inventory-2 (MMPI-2) written by Butcher, Dahlstrom, Graham [4].

In contrast to the passages and items of tests and inventories such as the TOEFL and MMPI-2, schema-based cloze multiple choice item tests (S-Tests) are developed on “authentic texts written to be read by literate public” [5]. S-Tests are based on the MICAST because their items are developed on the texts from which certain schemata are deleted and offered as the keyed responses. Unlike the TOEFL, the

alternatives of S-Test items, however, bear syntactic and semantic relationships with the keyed responses and thus compete with the author’s schemata in being chosen. It was hypothesized that S-Tests would correlate significantly with the reading comprehension subtest of the TOEFL because they measured the same construct.

To test the MICAST-based hypothesis above Khodadady and Herriman employed the article “Fear over Free Access to Medical Records” [6] written for the readers of New Scientist magazine to develop their S-Test. To this end, they chose and deleted 40 words of the article and offered them to the readers of the text with three competing alternatives. Each competitive shared at least one semantic feature with the authors deleted word but differed from it in certain distinctive features. In the first sentence of the article, “Privacy campaigners in the US have launched a fierce attack on a bill that they believe will expose medical records to many prying eyes,” Khodadady and Herriman did, for example, delete the word attack and then offer it along with raid, slander and ambush as its competitive.

Khodadady and Herriman [1] administered the 40 item S-Test to 12 and 24 first-year undergraduate students at the University of Western Australia who spoke English as their native and non-native language, respectively. The native English speakers’ (NESs) mean score (36.30) proved to be higher than that of non-native English speakers (NNESs), i.e., 29.90, on the S-Test, indicating that NESs understand authentic texts better than NNESs. They also outperformed NNEs on the reading comprehension subtest of the TOEFL.

In addition to the 40 item S-Test, Khodadady [3] developed a traditional multiple-choice item on the 30 words of the reading passages of a disclosed TOEFL [7] and called it contextual vocabulary. The three alternatives of the items on this test, e.g., jeopardy, garrison, and moron, offered as alternatives were traditional because they had no semantic relationship with the 30 words chosen from the passages constituting the reading comprehension passages of the TOEFL such as stigma offered as the keyed response to the phrase “A distinguishing mark of social disgrace” given as the stem of item. The S-Test and contextual vocabulary test were then administered along with the structure,

vocabulary and reading comprehension subtests of the TOEFL consisting of 15, 30 and 30 multiple choice items, respectively, to both NESs and NNESSs (Table 1).

Table 1: Correlations between Five Tests Administered to Undergraduate Students

| Testee | n | Test | Structure | Contextual vocabulary | vocabulary | Reading comprehension |
|--------|----|--------|-----------|-----------------------|------------|-----------------------|
| NNSs | 12 | S-Test | .60* | .76*** | .70** | .80*** |
| NSs | 24 | S-Test | .54** | 0.4 | 0.29 | -0.06 |

Adapted from “Schemata Theory and Multiple-Choice Item Tests Measuring Reading Comprehension” by Khodadady [3], the University of Western Australia.

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

As can be seen in Table 1 above, the correlation (r) between the S-Test and reading comprehension subtest of the TOEFL is .80. Since it is “in the .80 to 1 range” [8] they “measure the same variable”, i.e., reading comprehension ability of NNESSs. Furthermore, S-Test correlates significantly not only with the contextual vocabulary ($r=.76$, $p<.01$), but also with the structure ($r=.60$, $p<.05$) and vocabulary subtests of the TOEFL ($r=.70$, $p<.01$), indicating that the S-Test is also an empirically valid measure of structure and vocabulary knowledge of NNESSs as defined by authorities in testing. There is, however, no significant correlation between the S-Test taken by NESs with the contextual vocabulary, vocabulary and reading comprehension subtests of the TOEFL.

Khodadady and Herriman’s [1] findings above show that the TOEFL as a MACAST-based test of English language competence measures the structure, contextual vocabulary and vocabulary knowledge as well as reading comprehension ability of NNESSs. However, it is not a valid test to measure the contextual vocabulary, vocabulary and reading comprehension ability of NESs. In other words, what MACAST-based contextual vocabulary, vocabulary and reading comprehension subtests of the TOEFL measure is nothing but “aspects of basic English structure that are at least subjectively indispensable for effective academic work at the undergraduate level” [9]. These aspects are common to both NESs and NNESSs. Similarly, the State Trait Anxiety Inventory (STAI) measures a construct called anxiety suffered by two patients called state and trait anxieties by Spielberger [10] and M and C cases by Xi [2], respectively. This study was, therefore, designed to find out what that construct measured by Spielberger and described by Xi is

Based on the MICAST, it was hypothesized that Xi’s [2] histories of M case suffering from breast lumps and anxiety and C case suffering from breast lumps only are authentic texts whose constituting schemata differ from the schemata of MACAST-based STAI. Kleiner’s [6] authentic text based upon which Khodadady and Herriman [1] designed their S-Test was also subjected to the MICAST to compare its schemata with those of and Xi [2]. The same analysis was applied to the STAI and its constituting schemata in terms of a hierarchical structure through which Allah defines anxiety as an instinct rather than contradictory state and trait anxieties.

Methodology

Materials and Procedures

The schemata constituting the five reading passages of TOEFL [7], “Fear over Free Access to Medical Records” [6], the medical histories of Xi’s [2] model (M) and contrary (C) cases, and the State-Trait Anxiety Inventory (STAI) designed by Spielberger [10] were parsed to reveal their types and tokens as indicators of their empirical differences [3,6,7,10]. The parsing of M and C cases was, for example, based on the linguistic functions of the schemata. The first sentence of the M case, i.e., Andy, 31-year-old, is a successful business-woman in a transnational corporation, did, for example, consist of nine schema types, i.e., “31-year-old”, “a”,

“Andy”, “businesswoman”, “corporation”, “in”, “is”, “successful” and “transnational”. Among these types “a” had a frequency or token of two.

The Quran (Q) written by Allah, “the monotheistic God” [11], was also employed in this study to explore anxiety from its descriptive and explanatory perspectives. The Q was revealed to “Muhammad throughout a period of about 23 years” [12]. In addition to the Arabic Q, its English translations and commentaries by Asad [13], Nasr, Dagli, Dakake, Lumbard and Rustom [14], and Yusuf Ali [15], were consulted. The consultation was done to check the authenticity of Khodadady’s [16] development of 13 taxa through which individuals who suffer from anxiety as an instinct are specified.

Data Analysis

Following Hatch and Lazaraton [8] and Kent State University [17] Chi-square tests were used to test the hypothesis that the TOEFL and S-Test, the histories of M and C cases, and the state and trait items of STAI differ from each other in terms of their constituting schemata. For conducting the tests, the IBM SPSS Statistics 24 was utilized.

Results The MICAST-based analysis of the schemata constituting the reading passages of TOEFL (T) and “Fear over Free Access to Medical Records” (K) showed that they consisted of 1547 schema tokens out of which 1064 (68.8%) and 483 (31.2%) constituted the T and K, respectively. However, when the types of schemata were taken into consideration, 1547 tokens got reduced to 721 types (Table 2). While 492 (68.2%) and 165 (22.9%) types constituted T and K, respectively, 64 (8.9) types proved to be common to both T and K (T&K). (Interested readers can contact the present author for the list of the schemata constituting T, K, and T&K).

The schemata of K and T were also subjected to Chi-square test to find out whether there was enough evidence to suggest an association among them. They were found to be independent, i.e., $\chi^2 = 1442.000$ (1440), $p = 0.480$ (Table 2). There is no association between T and K because their constituting schema types tap into three distinct constructs, i.e. T, K and T&K. These results do thus explain why Khodadady [3] could not find any significant relationship between his NESs’ scores on the reading comprehension subtest and S-Test developed on the T and K, respectively.

Table 2: Chi-Square Tests of Schema Types Constituting T, K, and T&K

| | Value | df | Asymptotic Significance (2-sided) |
|--------------------|-----------|------|-----------------------------------|
| Pearson Chi-Square | 1442.000a | 1440 | 0.48 |
| Likelihood Ratio | 1172.68 | 1440 | 1 |
| N of Valid Cases | 721 | | |

a. 2163 cells (100.0%) have expected count less than 5. The minimum expected count is .09. Table 3 presents the schema tokens (308) and types (143) of M and C cases. As can be seen, the schema type “and” had the highest frequency or token (T) of 23. It was followed by “she” (T=22) and “the” as well as “was” (T=12) as the second and third highest tokens, respectively. While 200 (64.9%) schema tokens comprise M case, the number drops to 108 (35.1%) for C case. The difference in the number of schemata becomes significant when M and C cases are analyzed in terms of their types. Almost half of all schema types employed as history, i.e., 69 (48.3%), describe the patient with anxiety. Only 22 (15.4%) schema types, however, deal with the patient with no anxiety.

Table 3: Descriptive Statistics of Schema Types and Tokens (T) Comprising Model (M), Contrary (C) And Model and Contrary (M&C) Cases

| Types | C | T | Types | C | T | Types | C | T | Types | C | T |
|------------------|---|---|-----------------|---|---|----------------|-----|----|---------------|-----|-----|
| accidents | M | 1 | needed to | M | 1 | discovered | C | 1 | has | M&C | 2 |
| afraid | M | 1 | nervous | M | 1 | doctors | C | 1 | have | M&C | 3 |
| an | M | 1 | normal | M | 1 | early | C | 1 | her | M&C | 11 |
| anxiety | M | 1 | not | M | 1 | for | C | 1 | hospitalized | M&C | 2 |
| appetite | M | 1 | of | M | 2 | got along | C | 1 | however | M&C | 3 |
| arranged | M | 1 | often | M | 1 | it | C | 1 | in | M&C | 7 |
| as | M | 2 | other | M | 1 | like | C | 1 | intrusive | M&C | 2 |
| at | M | 1 | patients | M | 1 | lucky | C | 1 | is | M&C | 4 |
| avoidance | M | 1 | psychological | M | 1 | no | C | 3 | just | M&C | 2 |
| avoided | M | 1 | refused to | M | 1 | optimistic | C | 1 | live | M&C | 2 |
| be | M | 2 | removed | M | 1 | others | C | 1 | lumpectomy | M&C | 2 |
| because | M | 1 | sad | M | 1 | place | C | 1 | lumps | M&C | 3 |
| before | M | 2 | self-abasement | M | 1 | problem | C | 1 | mental | M&C | 2 |
| began to | M | 1 | since | M | 1 | ready | C | 1 | non-adaptive | M&C | 2 |
| came up | M | 1 | so that | M | 1 | seems | C | 1 | nurses | M&C | 3 |
| charming | M | 1 | some | M | 1 | stage | C | 1 | personal | M&C | 2 |
| colleagues | M | 1 | staff | M | 1 | that | C | 1 | physical | M&C | 4 |
| communicate with | M | 1 | state | M | 1 | well | C | 1 | pretty | M&C | 2 |
| concerns | M | 1 | still | M | 1 | with | C | 1 | reactions | M&C | 2 |
| could | M | 1 | stuck | M | 1 | 31-year-old | M&C | 2 | respects | M&C | 2 |
| during | M | 1 | suffered from | M | 1 | a | M&C | 9 | she | M&C | 22 |
| encouraged to | M | 1 | talk about | M | 1 | about | M&C | 2 | smart | M&C | 2 |
| entire | M | 1 | then | M | 1 | admires | M&C | 2 | steady | M&C | 2 |
| experience | M | 1 | there | M | 1 | after | M&C | 3 | successful | M&C | 2 |
| feelings | M | 1 | these | M | 1 | and | M&C | 23 | suggested | M&C | 2 |
| headache | M | 1 | thinking | M | 1 | Andy | M&C | 2 | surgery | M&C | 6 |
| if | M | 2 | treat | M | 1 | boyfriend | M&C | 4 | the | M&C | 12 |
| illness | M | 1 | unreasonably | M | 1 | breast | M&C | 3 | this | M&C | 2 |
| insomnia | M | 1 | wardmates | M | 1 | business-woman | M&C | 2 | thoughts | M&C | 3 |
| kept | M | 1 | were | M | 2 | corporation | M&C | 2 | to | M&C | 6 |
| life | M | 1 | what | M | 2 | everybody | M&C | 2 | transnational | M&C | 2 |
| loss | M | 1 | will | M | 2 | examination | M&C | 2 | uncertain | M&C | 2 |
| mad | M | 1 | worried about | M | 1 | feeling | M&C | 2 | uneasy | M&C | 2 |
| malignant | M | 1 | actively | C | 1 | felt | M&C | 2 | was | M&C | 12 |
| meeting | M | 1 | changed | C | 1 | found | M&C | 2 | year's | M&C | 2 |
| mind | M | 1 | cooperated with | C | 1 | future | M&C | 2 | Token | | 308 |

Table 4 presents the inferential statistics of schema tokens (308) and types (143) comprising the M and C. As can be seen, there is no significant association between them, i.e., $X^2(142) = 100.493$, $p = 0.997$, because the schema types constituting M and C cases tap into three distinct constructs, i.e., M, C and M&C. As will be discussed shortly, the M and C cases are independent of each other because M&C do not refer to a single self-suffering from either state anxiety or trait anxiety as X_i [2] and Spielberger [10] assumed. They refer to two distinct individuals who have actualized their self as a polytheist and self-theist, respectively.

Table 4: Chi-Square Tests of Schema Tokens and Types Comprising X_i 's (2022) Cases

| | Value | df | Asymptotic Significance (2-sided) |
|--------------------|----------|-----|-----------------------------------|
| Pearson Chi-Square | 100.493a | 142 | 0.997 |
| Likelihood Ratio | 131.696 | 142 | 0.721 |
| N of Valid Cases | 308 | | |

a. 278 cells (97.2%) have expected count less than 5. The minimum expected count is .35.

Table 5 presents the descriptive statistics of schema tokens and types comprising the STAI written by Spielberger [10]. As can be seen, it consists of 64 tokens and 27 types. While 9 schema types (33.3%) comprise the state-anxiety (SA), their number increases to 15 (55.6%) and then drops to 3 (11.1%) for trait-anxiety (TA) and state and trait-anxiety (S&TA), respectively. These statistics raise a MICAST-based question never answered by Spielberger who passed away on “June 11, 2013” [37], i.e., whom does the schema type common to both ST and TA, i.e., am, feel, and I, refer to?

Table 5: Descriptive Statistics of Schema Types and Tokens (T) Comprising State-Anxiety (SA), Trait-Anxiety (TA) And State and Trait-Anxiety (S&TA)

| Type | Spielberger | T | Type | Spielberger | T | Type | Spielberger | T |
|-----------|-------------|----|----------------|-------------|---|---------------|-------------|----|
| am | S&TA | 3 | secure | SA | 1 | over | TA | 1 |
| feel | S&TA | 17 | self-confident | S | A | possible | TA | 1 |
| I | S&TA | 20 | steady | SA | 1 | presently | TA | 1 |
| at ease | SA | 1 | confused | TA | 1 | strained | TA | 1 |
| calm | SA | 1 | frightened | TA | 1 | tense | TA | 1 |
| content | SA | 1 | indecisive | TA | 1 | uncomfortable | TA | 1 |
| pleasant | SA | 1 | jittery | TA | 1 | upset | TA | 1 |
| relaxed | SA | 1 | misfortunes | TA | 1 | worried | TA | 1 |
| satisfied | SA | 1 | nervous | TA | 1 | worrying | TA | 1 |
| | | | | | | | Token | 64 |

Table 6 presents the inferential statistics of schema tokens (64) and types (27) comprising SA and TA. As can be seen, there is no significant association between the schema tokens and types of the cases: $X^2(64) \geq 23.606$, $p = 0.598$. They are independent from each other because schema types and tokens Spielberger [10] had employed in the construction of his STAI did not deal exclusively with anxiety experienced by a single individual suffering from two different types of anxiety as he claimed it did. They describe two distinct individuals who have actualized their self through polytheism and self-theism, respectively, as discussed in the next section.

Table 6: Chi-Square Tests of Schema Tokens and Types Comprising the STAI

| | Value | df | Asymptotic Significance (2-sided) |
|--------------------|---------|----|-----------------------------------|
| Pearson Chi-Square | 23.606a | 26 | 0.598 |
| Likelihood Ratio | 32.301 | 26 | 0.183 |
| N of Valid Cases | 64 | | |

a. 50 cells (92.6%) have expected count less than 5. The minimum expected count is .42.

Discussions

Khodadady's [3] micro-structural approach in schema theory (MICAST) provides both theoretical and empirical means to explore the constructs measured by tests. MICAST-based tests can easily be developed by healthcare providers/ professionals (HCPs) on the schemata or mental concepts constituting the texts written to be read for communication. Macro-structural approach in schema theory (MACAST), however, rests upon the authorities of testing to define not only a given construct such as English language proficiency (ELP) and anxiety but also decide what texts and items should be written to test the construct.

As an authority in language testing Klein-Braley [18], for example, followed the MACAST and equated the ELP with that of native English speakers (NESs). She believed that a test of ELP would be valid if, and only if, NESs made "perfect scores" on the test. If they did not, then the test had to be blamed for suffering from "technical defects"! The present author, however, follows the MICAST and argues that the ELP is the ability of readers to understand the schemata constituting an English text as its author does not regard less of English being their native or non-native language. The ability involves a cognitive interaction not only between the author of the text and its readers but also other individuals brought up in the text.

The MACAST does not, however, accept the direct interaction between the authors and their readers unless it is mediated by testing authorities through traditional items having "plausible" stems or choices [19]. To the best knowledge of present author, no testing authority has ever been able to operationally define plausibility. They have, therefore, come up with certain "guidelines" [20] to develop plausible multiple-choice items as HCPs have with the tests of anxiety such as the STAI without reaching a consensus

as regards what the schema of anxiety is.

As the latest authorities on anxiety clinical psychologist Laposia [21] Rector, physician Bourdeau, registered social worker Kitchen, registered nurse Joseph-Massiah and clinical psychologist, for example, stated that "Everyone feels anxiety from time to time". Psychiatrists Bandelow and Michaelis [22] approached it as a disorder, including panic disorder with or without agoraphobia, generalized anxiety disorder, social anxiety disorder, specific phobias, and separation anxiety disorder, which affects "33.7%" of large populations during their lifetime.

Pharmacologists Adwas and Jbireal, and physiologist Azab [23], however, defined anxiety as "the pathological counterpart of normal fear" while physicians Munir and Takov [24] focused on its etiology and specified "stress, a physical condition such as diabetes or other comorbidities such as depression, genetic, first-degree relatives with generalized anxiety disorder (25%), environmental factors, such as child abuse and substance use disorder" as the causes of anxiety. Psychiatrists Sadock and Ruiz [25], nevertheless, defined it as an "Unpleasurable emotional state associated with psychophysiological changes in response to an intrapsychic conflict".

Sadock, Sadock and Ruiz [25] seemed to have borrowed the schemata "emotional state" from Spielberger [10] who related anxiety to "personality states" and "personality traits." Then he replaced "personality states" with "emotional states", arguing that "In contrast to the transitory nature of emotional states, personality traits can be conceptualized as relatively enduring differences among people in specifiable tendencies to perceive the world in a certain way and in dispositions to react or behave in a specified manner with predictable regularity". This very idiosyncratic application of "personality states" with "emotional states" as interchangeable synonyms resulted in the development of STAI whose items contradict or contrast with each other.

The schema tense in item “I feel tense” is, for example, the antonym of the so-called trait anxiety “relaxed”, brought up in another item on the STAI, i.e., “I feel relaxed” [26]. Similarly, the schema “uncomfortable” representing Spielberger’s [10] state anxiety is the antonym of his trait anxiety schema types “at ease”, “pleasant” and “satisfied” [27] constituting three other items on the STAI. Realizing this contrast, Spielberger reversed the scoring of so-called trait anxiety items from 1, 2, 3, and 4 to 4, 3, 2, and 1 for not at all, a little, somewhat and very much so, respectively!

It is argued in this article that anxiety is not an indicator of the so-called personality trait but of self-actualization. While personality measures such as the Myers-Briggs Type Indicator are developed on the subjective “theories of psychologist Carl Jung” [28] self-actualization rests on schema theory. Realizing the idiosyncrasy involved in the application of the schema person based upon which Spielberger’s [10] personality traits rest Harris [29], for example, asserted “the need to distinguish among “individual,” “self,” and “person” as biologicistic, psychologicistic, and sociologicistic modes of conceptualizing human beings [10,29]. The concepts differentiate individual as member of the human kind, self as locus of experience, and person as agent-in-society”.

As a clinical nurse Xi [2] might have realized the contradiction in Spielberger’s [10] “personality states” and “personality traits” because s/he conducted a concept analysis to provide “a comprehensive and rounded analysis of anxiety”. Xi defined it as “an uneasy personal feeling … [that] manifests [itself] as non-adaptive physical and mental reactions when people have “intrusive thoughts about uncertain future”. This definition contributes not only to self as a locus of experience, i.e., uneasy personal feeling, but highlights social interactions in which a patient suffering from anxiety reacts to the presence or behaviour of other people.

Unlike Spielberger [10] who does not explicitly address the role of other individuals in the anxiety experienced by a patient, schema theory not only does so but also assigns them to various taxa constituting the schema of self. Some of these selves are brought up in Xi’s [2] history of M case. The patient did, for

example, ask herself, “Will her colleagues treat her as before after the surgery? Will she still be charming to her boyfriend after the surgery?” She was also “often unreasonably mad at her boyfriend”.

Xi [2] did, therefore, help HCPs and researchers approach anxiety not from a subjective but from an objective or self-based perspective. As selves patients are not only the loci of experience but also interact with other selves as agents in their own society. While HCPs focus on diseases such as breast lumps and symptoms such as “headache, loss of appetite, and insomnia”, schema theory traces the causes of anxiety first and foremost to the taxon in which patients actualize their self [3]. While M case, for example, focuses on just her colleagues and boyfriend, Allah reminds her that He “created” (Q37:11) not only her and other HS but also “the death and life” (Q67:2) in order to test them as regards “the most virtuous action” (Q11:7; 67:2). To succeed in the test He appointed HS as His “vicegerents upon the earth” (Q035:39) so that they can “identify themselves with Him” (Q2:138) through “doing the righteous deeds” (Q2:277).

Instead of following and identifying with Allah, polytheists such as Xi’s [2] M case, i.e., the occupiers of the 7th taxon of self, follow their own desires such as becoming successful businesswomen at all costs even if it requires wronging your own self and others [16]. They close their eyes to several facts. First, as HS they have been originated on “the nature of Allah” (Q30:30) who wrongs none (Q3:161). Secondly, whoever wrongs others “wrong their own selves” (Q011:101). And finally, their instinct of anxiety becomes active (Q70:19) rendering them “fretful” (Q70:20) and “blaming” (Q75:2) other HS when a disease such as a breast lump befalls them.

Since a breast lump is “the most common presenting symptom of breast cancer” and breast cancer” [30] is “diagnosed in 10% of new breast lumps” it is quite likely that patients with breast lumps” [31] suffer from death anxiety, too. They are thus “forced to think of and confront the end of their lives” where they have to let go of successful life, business and boyfriends, to name a few [32].

Xi’s [2] C case is, however, a self-theist occupying the 8th taxon of self-schema [16]. Self-theists or “self-

made gods" [33] have other HS work for them to achieve their personal objectives (Q28:38) such as having lumpectomy. C case did, for example, cooperate "with the doctors and nurses actively" and get "along well with others" to recover from her surgery. She also took necessary steps like changing her living place in order to avoid anxiety producing environments.

Schema theory does, therefore, reveal the fact that Spielberger's [10] STAI dichotomizes patients through what he calls state and trait anxieties. The inventory is in fact a multiple-choice item measure of self-actualization in which only two taxa of self are addressed, i.e., polytheists and self-theists. Polytheists interact with fellow HS to satisfy their own desires even if they are wrong. However, they experience anxiety when they face problems such as breast lumps because they find the HS incapable of solving their problems. Self-theists interact with fellow HS as well. They do, nevertheless, manipulate them not only to secure their "delusional grandeur" (Q7:12) through "inter personal self-regulation" [34] but also overcome anxiety.

Conclusion

As the only true self Allah (Q32:5) brought up a hierarchical taxonomy in which He Himself occupies its highest taxon. Among mortal selves Linnaeus [35] was the first who developed his own taxonomy to classify organ isms such as *Homo sapiens* (HS). While Linnaeus limited his taxa to only living ones, Allah had included immortal as well as dead organisms in His taxa. Twelve of these taxa were first identified by Khodadady [16], i.e., True Self, psychological monotheists (MTs), observing MTs, MTs, fake MTs, doubtful MTs, polytheists, self-theists, wise theists, emotional theists, cognitive theists, and instinctual theists. These taxa are characterized objectively by the words constituting the 13th taxon of the hierarchy. While Spielberger [10] addressed just two of these taxa, i.e., polytheists and self-theist in his STAI, recent research has tapped into others. Templer et al.'s [36]. 51-item Death Anxiety Scale-Extended, for example, addresses fake MT who exploit MTs through lying and blaming them (Q014:22) to cover their wrongdoings as polytheists do with other HS. Self-theists, however, consider themselves gods who can achieve their personal objectives by

exploiting everyone and everything through whatever means possible. Future research is therefore, is required to study as many taxa of self as possible, particularly MTs and observing MTs who overcome the instinct of anxiety through assimilating with Allah (Q70:22-7).

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