

The Formulation of Social Neuroscience Midlife Crisis Predictability Apparatus for Midlife Progression

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ABSTRACT

The purpose of this paper is studying the social brain in the context of neuroscience to unveil their intricate relationship between social environment and neuroscience responses by formulating an effective social neuroscience midlife crisis apparatus to help creating predictability of this phenomenal by preventing it from the earlier stage. The research design was taking a three fundamental levels. The foundational level to collect data from 32 middle aged homogeneous sampling of midlife crisis sufferers through qualitative content analysis design for social and neuroscience thematic by conducting an in depth interview. The verification level to guarantee the validity of the data collected through the selected tests for reaching the re-tested reliability data. The confirmatory level to administer the data through the quantitative survey methods by using self-portrayed midlife crisis experience and self-reported midlife crisis definition to investigate the causal relationship of social and neuroscience to reach an outcome, thereafter the outcome is compared with verified qualitative social neuroscience midlife crisis. Data were analysed by SPSS/Version 25 for principal components analysis. Results from N=32 focus group shows 3 social construct components with 10 neuro-response delineating to 45 unit of meaning of social neuroscience factors. The literature and focus study of total 79 combined factors under Tucker's congruence coefficient interpretation shows the desirable 44 social neuroscience factors in 3 components emerged as independent identity factors. Six midlife crisis expert of different field respondents' validation by content validity index (CVI=0,906 value) has confirmed that the content is suitable to be used as the measurement for social-neuroscience midlife crisis. Pilot study N=34 analysis by content validity ratio (CVR=0.529 to 1) where 38 social neuroscience factors is retained and tested for internal consistency by communalities=0.5 results that all 38 items are relevant. Data comparison confirmatory by triangle test analysis in which Pearson correlation coefficient ($r > 0.75$) shows a positive strong relationship between two sets of variables. The results conclude that there are 3 components, namely biological life faded moment, interior misery intensity and personal hibernating symptom with 38 social neuroscience factors in the predictability apparatus that influence midlife crisis and should be used as predicting and developing therapeutic intervention facility to conquer the midlife crisis. Contribution of Social neuroscience midlife crisis apparatus is an effective scaled system for early prediction and prevention to diminish midlife crisis rate of occurrence, ultimately the details unit of meaning crisis predictability factors scale to assure the accurate intervention devising instrument to social support services.

Keywords- apparatus, midlife crisis, social neuroscience, predictability.

I. INTRODUCTION

As a popular life cliché goes, prevention better than cure. An accurate prevention is only possible with an effective prediction of the impending crisis with the help of an identification apparatus to forecast and modify the crisis for prevention (Li et al., 2020). Every crisis become ingrained early in human life development and will have implications for prevention (Gee, 2021). Predictability in

the prevention, reflecting a stage of appreciation of insurability in midlife crisis that contribution of accuracy and predictability to effectiveness for early elimination (Broulík, J. 2019).

Therefore, the definition of crisis is needed in order to assess systematically the impact of interventions on the occurrence of crisis (Vroomen, et al., 2013). The research task of crisis identification system and the apparatus development for crisis management is to

propose a set of measures to overcome the crisis in the processing (Ostaev, G. Y., 2020). The objective is to devise an apparatus for two crisis classification tasks, namely midlife crisis Detection and midlife crisis measurement from the perspective of social neuroscience (hereafter referred to as S-NrS), by formulating the crisis recognition apparatus for the crisis detector (Liu, J. 2021). The tool developed for midlife crisis security experts which finally hoping to be integrated in standard tool chains (Mack, H., & Schroer, T. 2020).

The existing social problems are of two crisis nature: prominently loud social crisis, and, deafly silent social crisis. The former is threatening our nation on the daily life issues on the sociological perspective that calling for an immediate action (Kiran, 2020), whereas the latter has subdued thousands of people on this land who are suffering quiescently without any aids and does not reprimand any response from the local authority's attention (Woon and Pang, 2017). S-NrS midlife crisis is a phantom that has succumbed many to the root of many lives.

Thus, this study is significant as it helps to close the following four S-NrS based gaps.

- **Practical gap:** 51% of Malaysian are suffering from at least one dimension of work related stress, and 53% of the participants in the survey getting less than seven hours of sleeps in a 24-hour period which has led to the increase of probability of developing severe social and mental health.
- **Theoretical Gap:** Sudden realization that their financial status and life accomplishment as compare with their fellow peers are far behind. Such situation triggers the feeling of inadequacy and start an inner self-doubt questioning that normally lead to a complete feeling of lost- social neuroscience dimension
- **Time gap:** The sequence of the events (the timeline of the occurrence of midlife transition has not been taking into consideration by Jaques, as such the Gap of the pre-crisis and post-crisis has not been highlighted.
- **Cultural gap:** Culturally, the degree of third world Malaysian situation of midlife crisis may be dissimilar to those western developed country.

The main ultimate aim of this study, therefore, is focusing on social brain in the context of neuroscience to disclose their intricate relationship between neuroscience health and socioeconomic environments (Suryoputri, 2022) by devising an effective S-NrS midlife crisis apparatus to help creating predictability of this phenomenal by curtailing from S-NrS midlife crisis prone to S-NrS midlife crisis prepared from the earlier stage.

II. LITERATURE REVIEW

There are four S-NrS literatures context for review. They are as follow:-

- **Midlife**

Midlife, a critical stages of life in which a rapid

change points progression occurred in term of character change and the point of subconscious meaning of death to the conscious one (Jaques, 2018). The question of when an individual is considered has stepped into his midlife in one's cycle of life, in which midlife crisis occurred, according to Jaques (2018), it started as early as the 35 of age and at full maturity around the age 65. According the 4 stages social neuroscience life cycle model by Boey, L. H. (2022), the identification of the duration of midlife is started from 14,000 days to 21,000 days in his 28,000 days life cycle model. Midlife is not a dilemma of chronological age complication but a metaphysical antiphon to the emotional disturbance consequence (Montero, 2018).

- **Midlife crisis**

The notion of midlife crisis is a famous concept of social science in United State since 1976 when Scull published a book entitled "Passages: Predictable crises" (Scull, A. 2020). This form of crisis normally occurred in progression of identity change and self-confidence due to the shortcomings in personal life, or unmet goals when reaching certain age in one's life phrase and ultimately leads to the awareness of own inevitable mortality (Elliott Jacques, 1965). Midlife crisis is the beginning of a deterioration in their character which leads depression and psychosomatic illness, due to the depth and chronicity of his denial of self (Jaques, E. 2018). The happening of midlife crisis is not connecting to the chronological age or biological reality (Schmidt, S. 2020), but rather, it is pertaining to a specific to the crises associated with emerging adulthood and middle adulthood in the context of social structure (Yu, S. O. 2015). Such crisis emergence depends on the individual's need of responding to the oppositions of life concept like young & old, rich & poor, success & failure (Klimczuk, A. 2016).

- **Social neuroscience**

Social neuroscience is about the social brain interaction between social functions and brain mechanisms which lead to adaptation to the social situation whereby launches a new horizon of the social neuroscience responses (Greenberg, 2021). In this situation, an adult's risk-taking attitude is declined when there is a reversal in the brain's cognitive control system, and such modification enhances an individual's capacity for self-regulation (Steinberg, 2017). There are three components of social neuroscience encapsulated in third quarter of an individual life that is affecting their midlife journey, namely specialisation illusion; Latent switch; Repertoire circumscribe (Boey, L. H. 2022). Unlike the behavioural pattern study, it is an emotional state reaction within an individual when an interactions of social construct with neurology modification which leads to a results of dream to reality with mood ology (Müller-Pinzler, et al., 2016). As such, by naturalising the social stimuli to a higher level and taking the advantage of the neuro-responses, hence to put the S-NrS into own disposal for own benefit (Fan, S., 2021). Henceforth, the missing

link between social science and neuroscience is connected under this study (Vrtička, P. 2017).

- ***S-NrS measurement instrument***

In order to assess the earliest psychic development modification during midlife, a compelling and efficient in various cognizable function domains to help in instrumentalism of assessment devices are required (Lin, Et al., 2017). If the community had worked together by networking, more identified practical steps, methods and tools in dealing with S-NrS responses would have been broadly accessible along the way (Rexford, J. 2019). Since the risk taking attitude is the brain's cognitive control system, such assessment strategy for risk was established to prioritize and plan subsequent condition to achieve renewal assessment strategy (Donnally, S. 2017).

III. RESEARCH METHODOLOGY

Three stages methodology is employed under this study: Data collection for the purpose of building up social components and neuroscience factors for midlife crisis; data testing to verify the validity of the data collected for S-NrS midlife crisis apparatus formulation process; data confirmation by comparing the personal and public data as a tool to identify the status of midlife crisis. All the collected data is subject to the investigation under SPSS V25 for principle component analysis.

Stage 1: data collection

This process is involved in building up the information for final formulation of social neuroscience midlife progression experience apparatus as substantive midlife crisis predictability for Malaysian through a focus group.

The objective is to formulate the S-NrS components and factors by finding out the social construct components of midlife crisis occurred, then alienating the units of meaning to neuroscience responses factors from 32 homogeneous individuals, age 30 to 60, who are under the therapeutic follow-up treatment for midlife crisis from a local counselling centre volunteered to share their personal midlife crisis experience through an in-depth interview. Their answer is voice recorded with permission, scripted, then their midlife crisis phenomena content experience is thematically examined and compiled according to two data aspects: social construct (participant's interaction within social context), and, neuroscience responses (neurone-responses within the social construct to develop the crisis in their midlife). In other words, participant's psychosocial development in a real sense of emotional attachment to a phenomena within a social construct at different life stages. There are 45 neuroscience factors from 3 social dimensionality components is developed from focus group study.

Stage 2: Data verification

The objective is to investigate the validity of the formulated provisional S-NrS form with the purpose for future administration of this form as an apparatus to

predict the social neuroscience midlife crisis with reliability. Three verification process methods used. They are triangulating by Congruence efficient test; Expert respondent's validation; Pilot study.

The initial 3 components with 45 neuroscience factors is triangulated compare with the scholar literature of S-NrS midlife crisis factors to form a provisional survey form of 5 components social construct with 79 neuroscience factors constructed. The composition of the provisional form are as follows:-

- 2 components with 34 S-NrS midlife crisis factors by Boey & Hatta (2022), and,
- 3 components with 45 S-NrS factor aspects from the focus groups.

The form is then subjected to Tucker's congruence coefficient test to avoid the repetition of the similar nature factors.

The obtained results from tucker's congruence coefficient is further verified by the expert respondent's practitioners in the area of midlife crisis who has more above 10 years of experience by content validity index (CVI) method. CVI is one of the most popularly used measures (Kovacic, D. 2018). The opinion of expert from different fields who major in the same subject matter of midlife crisis is measured by 4 specified aspects for all the 44 S-NrS items, in which each item scale (I-CVI) as well as for the overall scale (S-CVI) is compiled to test the strength of the form (Bobos, et al., 2020).

The original form of 44 S-NrS factors items is further tested by a pilot group. The provisional S-NrS form is given to the expert respondents to hand over to their clients who are consulting them on the issues of midlife crisis. 50 individuals with the age band above 35 years old is given the provisional form to answer, of which 28 responded with their answer. The named factors and components are further sharpen with more content accuracy by Content Validity Ratio (CVR). This method is chosen because CVR is an explication of statistical significance testing applied to minimum content validity ratio (CVR) values (Baghestani, A. R., et al., 2019).

The initial provisional form of 5 components with 79 factors which is then reduced to 3 components with 44 S-NrS factors survey form which is tested under communalities for internal consistency. Thereafter focus group results is combined with Boey & Hatta (2022) S-NrS literature and named as Social Neuroscience Midlife Progression Experience Questionnaires (hereafter referred to as S-NrS MPEQ) for investigation.

Stage 3: Data confirmatory

The objective is to conduct a quantitative study on this survey form to check the reliability. The 44 factors with 4 components S-NrS MPEQ survey form is sent out to the general public through phone contact and social media in facebook, instalgram and telegram groups which reached 843 individuals, of which 264 responded (31.3% reaction rate). After minus incomplete forms, last sample of 220 individuals taken for data analysis under SPSS by principal components analysis.

IV. ANALYSIS AND RESULTS

A. Finding from data collected from focus group

The chief purpose is for formulation of social neuroscience midlife crisis factors and components by qualitative in-depth interview. The transcription of the 32 midlife crisis sufferer respondents is content analysed and thematically extracted. Their midlife crisis experience is content examined and compiled according to two data aspects: social construct (participant’s interaction within

social context), and, neuroscience responses (neurone-responses within the social construct to develop the knowledge of the world), in which participant’s psychosocial development of emotional attachment to a phenomena within a social construct to interview’s aims, namely establishing the social components that triggered the neuroscience responses which leads to midlife crisis occurrence. Following (see table 1) are the results found where three main subject-matters social construct components of 10 neuro-response with 45 S-NrS factors derived.

Table 1: 3 social construct components with 45 neuroscience factors from 32 participants

Social construct components	Neuro-response bracket	S-NrS unit of meaning Factors
Biological development issues.	<ul style="list-style-type: none"> Physical body fitness Aging Conscious deadness 	<ol style="list-style-type: none"> 1) Unable to develop body shape back to the past 2) A need to make oneself look young again 3) Unhappy with body shape & size 4) Body cannot function as it used to be 5) Experiencing signs of physical aging 6) Sensing of tiredness easily 7) Discourage being seen as old by youngster 8) Not as fit and efficient as before 9) Realising death is inevitable & coming nearer 10) Experiencing parent death recently 11) Often recall old memory of the past
Stress issues	<ul style="list-style-type: none"> Relationship tension Work actualization struggle 	<ol style="list-style-type: none"> 1) Doubt of capability to achieve goals 2) Could not find the work purposes 3) Life has become a bore 4) I know what my core values are 5) Uncertain of continuing with current job 6) Doubt of whether in the right profession 7) Worried about how others view you 8) Doubt of whether in the right relationship 9) Getting tougher to solve work problems 10) Achieve more failure than success in career 12) Feel anxious about half of life is gone 13) Feel blocked at work but not sure why 14) Sudden job anxiety without knowing why 15) Bug by childhood negative memories
Failure in life issues	<ul style="list-style-type: none"> Ineffective time management during the younger time Wrong decisions Unmet achievement Competition edge 	<ol style="list-style-type: none"> 1) Realizing peers is doing better in careers 2) Experienced work depression 3) Achievements at work not matched ambitions 4) Not ready to sacrifices for getting to the top 5) Missed a lot of opportunities in life. 6) Values concession for better advancement 7) Illusions about people look down on you 8) Experiencing job discontentment 9) Some of core beliefs have been challenged 10) Cannot fulfil personal needs 11) Feel social injustice hitch to reach potential 12) Sacrifice family for getting to the top at work 13) Think of life is already behind you 14) People hindrances for achieving job potential 15) No time to fulfil important life dreams 16) Unable to detail the important life goal 17) Waste energy on unproductive activities. 18) Knowing youth is gone & starts growing old 19) Losing competition edge to young colleagues

B. Data verification of S-NrS MPEQ components and factors

Three methods of verification to determine the trustworthiness of the finding for the components social construct and the S-NrS factors. They are as follows:-

1. Cross-validation: triangulating the found data compare with different data sources of the similar subject matter.

The two sources of combination data is under the investigation. S-NrS midlife crisis factors from Boey & Hatta (2022) literature cross validate with the focus group finding. Tucker's congruence coefficient is used to assess the desirable identity of the S-NrS factors by identifying

the critical similarity of 2 sets factor interpretations. The congruence between two different sources of S-NrS factor sets is merged into the same unit measures whereby the repetitive factors similarity between these two sets of scores will be taken out. Tucker's congruence coefficient after Ledyard Tucker who popularized the technique. Its values range between -1 and +1. According to Lotfi (2018), coefficients above 0.85 indicate fair, coefficients above 0.90 indicate high similarity and coefficients above 0.95 indicate identical. Table 2 below shows the results of the congruence coefficient of S-NrS factors from the two different sources.

Table 2: Tucker's Congruence Coefficient for 79 S-NrS factors from 2 sources

Midlife crisis		Sources from Boey & Hatta (2022)
		2 components with 34 S-NrS factors
Source from Focus group	3 components with 45 S-NrS factors	<ul style="list-style-type: none"> • 11 Excellence congruence factors with above 0.98 • 24 Good congruence factors with 0.92 to 0.98 • 7 Borderline congruence factors with 0.82 to 0.91 • 32 Poor congruence factors with 0.68 to 0.81 • 5 Terrible congruence factors with below 0.68

The combination total of 79 S-NrS factors from the two sources shows that there are 35 factors are of good to excellence similarity factors with identical nature, the 35 congruence factors are of repetition of the same content. As such, the prominent different nature of 44 S-NrS emerged as independent nature of identity factors which is to be used under this study. The original 79 formulated items (34 S-NrS factors of "S-NrS midlife crisis" by Boey & Hatta (2022) and additional 45 items from the focus groups) which has reduce to 3 components with 44 S-NrS factors.

2. Expert respondents' validation

Expert respondents validation is a technique involve confirmatory step to gauge each individual item of 44 S-NrS factors for effectiveness to see if they still ring true (Hair, J. F. et al., 2019). Partial validation is performed because the original 79 S-NrS factors has

validated and has undergone a minor modification to 44 S-NrS factors. The validation process is a content reliability test to ensure there is no significant misconstruction of the 44 S-NrS items (Abd Halim, 2020). For the expert confirmation of the content accuracy, generally the translated 44 items with content validity index (CVI) of .78 or higher from three or more experts could be considered evidence of good content validity. Content validity index (CVI) is the most widely used index in content evaluation with the minimum acceptable expert number of two, however most of recommendations propose a minimum of six experts. Table 3 is the CVI computation by individual experts giving a rating of "very relevant" or "relevant with minor revision" (rating 3 or 4) for each item divided by the total number of experts.

Table 3: Scoring method to guide experts in their scoring

	Relevancy(R)	Clarity(C)	Persistency(P)	Inclusivity(I)
1. Not relevant				
2. Item need some revision				
3. Relevant with minor revision				
4. Very relevant				

Note: word "relevant" is replaced by the area of scoring index. Example: not relevant to not clear, not relevant to not consistent and so on and so forth.

Table 4 shows the results of the content validity index (CVI) by the six experts specialised in midlife crisis from different fields of practice, whom has tested the 44 items form from 4 dimensional measurement aspects of

content. The overall results of 0.906 CVI value achieved which has confirmed that the content is suitable to be used as the measurement for the S-NrS midlife crisis. The results are as follows:-

Table 4: Content validity index (CVI) by 6 experts in the field of midlife crisis

Experts	Relevancy	Clarity	Consistency	Inclusion	Total score
Psychologist	42/44	43/44	35/44	44/44	164/176
Counsellor	41/44	41/44	38/44	39/44	159/176
Educator	38/44	40/44	37/44	42/44	157/176
Neurologist	39/44	41/44	37/44	40/44	157/176
Clinic Nurse	43/44	40/44	36/44	41/44	160/176
Therapist	42/44	39/44	39/44	40/44	160/176
Score					957/1056
Content validity index (CVI)					0.906

Following are the re-shaped and revised social components:-

- a. Biological development issue into “life faded moment” as used in Boey & Hatta (2022)
- b. Stress issues into “inner misery intensity” of midlife crisis.
- c. Failure in life issues into “personal stagnation” hibernating in unproductivity of achieving life goals.

3. Pilot study finding

Critical purpose for pilot testing of the face validity and content validity should be checked with amendments by actual midlife crisis sufferers accordingly. 44 S-NrS factors is handed over by the expert’s respondents to 50 midlife crisis sufferers individuals with age band above 35 years old for content accuracy verification of this form, of which 34 answered. The data from the 34 respondents who answered is then being analysed by content validity ratio (CVR), a method suggested by Lawshe (1975), which has grown and

widely used index to quantify content validity to examine the minimum content validity ratio (CVR) values (Baghestani, A. R., et al., 2019). The CVR tells us about the validity of individual factors (Gilbert, G. E. 2016). The three components 44 S-NrS factors are reshaped thereafter.

The formula of content validity ratio is $CVR = (N_e - N/2) / (N/2)$. N_e representing the number of recruited participants indicating the factor as "essential" in their answer, and N representing the total number of candidate participated. CVR measurement scale is between -1.0 and 1.0. The closer to 1.0 the CVR is, the more essential the object is to be considered. Conversely, the closer to -1.0 the CVR is, the more non-essential it is. Factors with CVR value bigger than 0.49 remained in the instrument and the rest eliminated. The list of the 44 S-NrS factors items is calculated individually to determine eliminating or retaining the individual factor. Table 6 show the whole array of the results from the pilot study.

Table 5: CVR calculation on each S-NrS factors to reach judgment results

S-NrS factor	N_e^*	CVR **	Interpretation
1	9	-0.471	Factor eliminated
2	26	0.529	Factor remained

Table 6: CVR values from 34 samples with 44 S-NrS factors judgment results

S-NrS factor	N_e^*	CVR **	Interpretation
38 items	26-34	0.529 to 1	Essential: Retained
6 items	9-25	-0.471 to 0.471	Less essential: Eliminated

38 S-NrS factors is retained and tested for internal consistency by communalities which give the results that all 38 items are above 0.5. Thus, it is concluded that there are 38 S-NrS factors is to be use in the predictability apparatus.

C. Data confirmatory by comparative quantitative survey in public

Current quantitative survey administered to the general adult public by using the S-NrS MPEQ. Data obtained from the research participants is examined and tested whether this apparatus would be a sound measure for the occurrence of midlife crisis by using the following

two analysis:

- 1) The form meets the criteria of a sound instrument as per the SPSS; and
- 2) The results obtained demonstrate validity according to the verified S-NrS results.

1. Methodological soundness of S-NrS MPEQ

3 social components with 38 neuroscience factors of S-NrS MPEQ is checked across 220 samples in SPSS for principal components and factors analysis. Table 7 are the summary results of the values.

Table 7: EFA results of 3 components with 38 S-NrS factors analyse across 220 cohorts

Sample	Total variance explained	KMO values	Communality	Matrix pattern (Coefficients)
220 Full cohort	Total variances strength: 63% with 15 factors eigenvalue above 1	0.902	Above 0.5	Above 0.4

Kaiser Meyer-Olkin KMO results on 220 respondents on the 38 factors is 0.902 which is above 0.5 and Bartlett’s test (below 0.05) suggest that the sample size of 220 participants is great. Communality 0.5 and above shows there is a substantial internal correlation amongst all the 38 S-NrS factors in the data. Total variance explained shows 15 strong social neuroscience factors exist in the quantitative study. Matrix pattern value above 0.4 for all the 3 social components shows that the three components are good.

2. Results comparison from 220 cohorts with S-NrS MPEQ components as a predictor of midlife crisis

The aim here is to check if there was a causal relationship between social construct of quantitative perspective with S-NrS MPEQ qualitative. Since the dependents variable of neuroscience responses is influenced by the independents variable of social construct, hence the S-NrS factors would remain if the social construct components unchanged. In this case, the social construct components is to be investigated. Thereafter causal comparative study from the public perspective as well as the personal experience perspective is compared to find out the similarity/different social components as a results. Comparison between qualitative and quantitative study research in social sciences have the principle purpose to regulate the connotation between an independent variable and a dependent or consequence variable (Mehrad & Zangeneh 2019). The analysis takes two stages.

- Stage 1: The Data collection from the 220 participants.

Following data is obtained from the personal opinion from 220 participants of what midlife crisis is to them. 203 offered their self-view of what midlife crisis is and 17 do not know the answer. Following is the sum the 3 social construct components by the 203 respondents.

- Life Stagnation – career and life unproductivity mostly
- Interiority – Human interaction dynamic stress
- Death/aging-Concern about personal attractiveness and inevitable death uncertainty

- Stage 2: Test the relationship between the two categories components

The relationship between two sets of variables can be statistically tested by Pearson correlation coefficient (r) by measuring their linear correlation between the two. This is the best and most common way of measuring association between variables. The number between -1 and 1 that measures the strength and direction of the relationship between two variables. Correlation coefficient (r) above 0.75 is considered as strong correlation between two variables. R=0.6: a moderate positive relationship. R= 0: no relationship. R= -1: a perfect negative relationship. Table 8 below shows the existence of correlation between the two sets of variable, and thus, confirm that the independent social construct variable of the two sets variables are synchronize statistically.

Table 8: Pearson Correlation coefficient

		Life stagnation	Interiority	Death /aging
Life faded moment	Pearson correlation	0.872	0.823	1.000
	Sig (2-tailed)	.	.000	.000
	N	11	10	14
Inner misery intensity	Pearson correlation	0.768	1.000	0.823
	Sig (2-tailed)	.000	.000	.000
	N	10	14	10
Personal stagnation	Pearson correlation	1.000	0.768	0.872
	Sig (2-tailed)	.000	.000	.
	N	14	10	11

From the above Confirmatory process, one can conclude that S-NrS MPEQ has fulfilled both statistical tests, namely the exploratory factors analysis (EFA) in SPSS and the verification of synchronization between the objective S-NrS MPEQ components and the subjective S-NrS components. This, it is confirm that the two independent social construct sets with strong correlation

amongst the variables. Henceforth, the S-NrS MPEQ is confirmed as sound and accurate apparatus to measure and predict S-NrS midlife crisis during the midlife progression. Following flow diagram (see diagram 1) is a run through of the entire apparatus formulation to reach the finale point of the outcome.

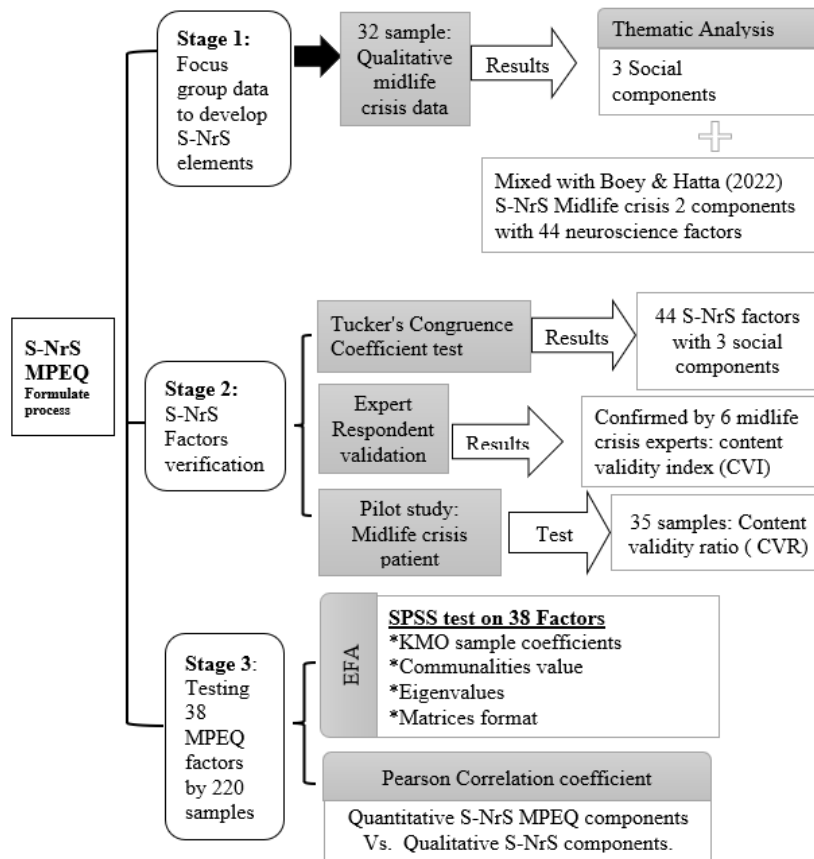


Diagram 1: S-NrS MPEQ apparatus formulation process

V. CONCLUSION

In conclusion, the objective of formulating the S-NrS midlife crisis apparatus as for predictability as a devise of earlier prevention has accomplished. The last two important points to table for discussion is the 3

components with 38 S-NrS factors as midlife crisis predictability apparatus, as showed in table 9, is shared for the future usage by any therapist or coach for an early prevention of midlife crisis, and, the total contribution of this journey.

Table 9: The 38 S-NrS factors as midlife crisis predictability apparatus.

Social Constructs	Social Neuroscience Factors	Scales				
		1	2	3	4	5
Biological life faded moment	1) Unhappy with body shape & hope to look young again					
	2) Body cannot function as it used to be					
	3) Experiencing signs of physical aging					
	4) Sensing of tiredness easily					
	5) Discourage being seen as old by youngster					
	6) Realising death is inevitable & coming nearer					
	7) Grief over loss of parent or significant figure					
	8) Often recall old memory of the past					
	9) Lost the sense of self concept					
Interior misery intensity	1) Doubt of capability to achieve goals & solve problems					
	2) Could not find the work purposes					
	3) Life becomes bore & pronounced changes in mood					
	4) Doubt of whether in the right profession					
	5) Worried about how others view you					
	6) Doubt of whether in the right relationship					
	7) Achieve more failure than success in career					
	8) Feel anxious about half of life is gone					

	9) Sudden job anxiety & blocked without knowing why					
	10) Bug by childhood negative memories					
	11) Changing family dynamic					
	12) Loneliness					
	13) Latent disillusioned and uninspired in life & career					
	14) Think of death					
	15) Intense soul searching & feeling they are falling behind					
Personal hibernating symptom	1) Frustrating to realise peers is doing better in careers					
	2) Achievements at work not matched ambitions					
	3) Not ready to sacrifices for getting to the top					
	4) Missed a lot of opportunities in life					
	5) Values concession for better advancement in career					
	6) Illusions about people look down on you					
	7) Experiencing job discontentment					
	8) Cannot fulfil personal needs					
	9) Feel social injustice hitch oneself to reach potential					
	10) No time to fulfil important life dreams					
	11) Losing competition edge to youngster					
	12) Social detachment and withdrawal					
	13) Waste energy on unproductive activities					
	14) Missed a lot of opportunities in life					
TOTAL						

Scales indicator: 1=strongly disagree. 2= Disagree. 3=Neutral. 4=Agree. 5=strongly agree.

Table 10: Social neuroscience midlife crisis diagnosis grid

Diagnosis	Determinant	Number of strongly agree	Number of agree
Below 20 factors: Not happened			
20 – 25 factors: Early midlife crisis in developing			
26 – 30 factors: High probability of happening			
31 factors and above: Confirm happened			
TOTAL			

With this newly formulated design of predictability apparatus available, this study has helped to contribute in fulfilling the following gap areas.

• **Mid-age Studied gap**

Significant gap in the middle age adult literature (Waters et al., 2021) where this paper has successfully furnished the gap of knowledge deficiency in the area of S-NrS midlife crisis with a new look of the three social components midlife crisis and 38 factors of the leading cause.

• **Precautionary measurement gap**

An increase of adult between age 20 to 40 in Malaysia whom shall soon progress into their midlife stages which need an ever ready precautionary devise for predicting the S-Nrs midlife crisis from preventing young generation to walk the same trail of suffering by the earlier generation.

• **Literature gap**

S-NrS midlife crisis has prolong to beyond the midlife stages (Boey &Hatta, 2022). Hence, the literature on social dimensional challenges faced by the middle age group people which leads to the social-psycho aspect of

crisis has become richer through this study as compare to other literature aspects to the middle age group.

• **Wrongful perception gap**

The hypothesis on the midlife adult is a peaceful season with little transition obstacle is a vulnerability hypothesis about midlife (McClendon, 2019). Data of current outlook of Malaysian with 38 S-NrS Factors as S-NrS midlife crisis will raise the competencies mark of the public perception on this subject.

• **Valid identification tools gap**

The S-NrS midlife crisis apparatus facilitate the categories precision of identification of the social neuroscience midlife crisis for the social-psycho practitioners.

• **Systematic new framework gap**

The diagnosis degree grid for S-NrS midlife crisis of social-neuro factors from pre-crisis development, to high probability crisis, and last a confirmed crisis stages for an individual so that the right level of momentum adjustment proposal according to individual’s diagnosed situation to heal their mental wound with definiteness.

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