



Word Association as a Tool to Understand Social Order Perception on Individual Level

Gusdi Sastra¹, Ainun Mardhiah²
Andalas University, Indonesia

ABSTRACT: Men's and women's language has long been a subject of research in a variety of disciplines. Since the 1970s, some fields of linguistics has been doing so through the viewpoints of sociolinguistics, anthropology, dialectology, and other fields that examine groups of people. Only a few studies have examined the social consequences on individual level. The purpose of this study is to examine the psycholinguistic perspective on the differences or similarities in responses between males and females. This is a single case study with two persons of the opposite sexes. Thirty-four Kent-Rosanoff stimulus words were chosen based on their conceptual categories. The results show that male and female subjects differ and are similar in a variety of conceptual areas as a result of psychological and societal influences. Psychological impacts are especially evident in the conceptual areas of general adjective, activity, body part, and emotion. Meanwhile, the social influence is dominant in the conceptual areas of religion and tools.

KEYWORDS: psycholinguistics, neurolinguistics, word association, gender language, society

Received 18 July, 2021; Revised: 01 August, 2021; Accepted 03 August, 2021 © The author(s) 2021. Published with open access at www.questjournals.org

I. INTRODUCTION

No matter where they are in the world, every communal organisation has its own set of regulations. To sustain social harmony, community members must adhere to existing social norms and orders. There are two distinct definitions for social order that are associated with Karl Marx and Émile Durkheim. The former explanation of social order originates from the Marxist tradition and proposes a materialist view rather than a cultural structure. Marx emphasised inequalities in wealth and power in capitalist societies. The latter emphasises the role of shared norms and values in maintaining structure and unity in society. For Durkheim, social order focuses on mutual self-interest and agreements ("Social Order," 2021). This study adopted the latter, as it was intended to observe how social orders are operated in the minds of its members.

As members of society, men and women are obligated to adhere to the established social order and conventions. People are known to develop gender role ideas or sex-typed expectations in society. Women, for example, are seen to be especially nurturing and loving since they provide more childcare than males in most industrialised cultures. Men are perceived to be more powerful and forceful because they are more likely than women to occupy higher prestige occupations in industrialised societies. The way men and women behave and socialise in social settings are explicitly and implicitly regulated by social order.

1.1 Language as a Reflection of Society

Humanity's most vital tool is language. It enables us to communicate ideas and information, allowing us to share our opinions. Language reflects a civilisation's culture as it transmits information and reveals how that society receives, analyses, assesses and expresses its knowledge about the world. According to Coates (2013), anthropologists view language as a part of the social behaviour of a society. The evolution of a particular language over time reflects the evolution of the society or cultures that use it since changes in cultural viewpoint, social composition, and political conditions have a profound effect on a language. As a result, language and culture are strongly intertwined in human studies.

There are two stages in the language process: productive and receptive processes. The productive process (encoding) is the process of language design that occurs within the speaker through articulation. The receiving process (decoding) occurs in the listener as the recipient of the code stated by the interlocutor and received through the listening organs, a.k.a. ears (3). Additionally, Chaernoted that when an individual responds to a stimulus word, a process known as language creation happens.

The process of language production is divided into three stages. The idealisation stage is the process of generating ideas, thoughts, emotions, and everything else that exists in one's mind. The design step involves choosing language forms that will accommodate the transmitted ideas, thoughts, and emotions. This level comprises components that are phonological, syntactic, and semantic in nature. The implementation stage happens when a psychological verbal code is formed or when a linguistic flow of speech emerges. Each of these three steps occurs during the course of an utterance. Even if a person pronounces just one lexicon, they must have passed through the three stages of language creation outlined above in a relatively short period of time.

Language may be viewed as more than a means of communication; it can also be viewed as a mirror of the societies that use it. The specific words that comprise a language, as well as the grammar used to express that language, reveal how a civilisation sees and communicates information about its surroundings. The process of language production is so brief that it reveals fundamental aspects of how a person thinks. By digging extensively into society members' language, a deeper knowledge of that society may be gained.

1.2 Differences and Similarities between the Languages of Both Genders

In the early 1970s, linguists began to place emphasis on the distinctions between male and female language. The dominant views include Lakoff's (1975) deficit model, which reports that female language is inferior to male language, Thorne's & Henley's (1975) dominance theory, which states that female language is superior and male language is a kind of deficiency, and Cameron's (2003) argument that women are better at listening and sharing emotions. According to Lakoff, the distinctions in lexicon, syntax, and pragmatics result in a distinct type of female language: submissive, uncertain, and passive. Their manner of communication is shaped by the social expectations placed on females and their subordinate status within their society. Regardless of the standpoint from which they conducted their research or the methods they employed, the majority of scholars advocate for the advancement of their researches into gender differences.

Sastra (2014) did a study in which he investigated this topic from a neurolinguistic approach. The difference in language between men and women is due to the left and right hemispheres' distinct functions. These distinctions result in differences in language behavior, both linguistic and pragmatic. In women, the region of the brain linked with language is greater than in men. This results in women having a higher level of linguistic proficiency. On the other side, because males are more action-oriented, it's difficult for them to comprehend unspoken feelings.

Maltz & Borker (1982) attempted to explore the cultural foundations behind male-female language differences and similarities. They have undertaken extensive research on this subject, including social, cultural, and psychological determinants. They noted in their research that males and females come from quite varied cultural backgrounds. In their research, the term "culture" refers to a subculture. These transcultural variances result in their language and conduct having distinct traits. These subcultural differences begin in childhood, develop gradually, and persist throughout life.

Regarding male and female similarities, Maltz & Borker (1982) reported they derive from their shared national language culture that bind them together. Males and females both develop their values and ways of life inside their national culture. On the other hand, they develop their own values and ways of life within their own subcultures. As a result, their behaviour, particularly linguistic behaviour, must exhibit both similarities and differences. Until today, it appears as though there has been an endless argument over whether female and male languages are distinct or similar.

The researchers do not attempt to rule out similarities between male and female languages in this study. Indeed, similarities and differences are equally essential, as they comprise the unique gender languages. The researchers discovered some similarities between the male and female lexicons using the word association test, but the discussion continued to dig deeper into the differences created by the influences of social factors.

1.3 Word Association

A word association test is a tool that, depending on how it is used, is capable of assessing the mental lexicon capacity and psychological association in great depth. The results of utilising the word association test as a psychological association test aid in the comprehension of individual and group characteristics. According to Ali & Kridalaksana (1997) in *The Great Dictionary of the Indonesian Language*, association is the establishment of a relationship or connection between ideas, memories, or the five senses activities. Researchers can use word association data to better understand how a person's vocabulary is stored and arranged in the brain/mind.

Typically, word association is accomplished by a straightforward stimulus-response method. The researcher displays or speaks the stimulus word, and the respondent speaks or writes the word that occurs to them. There are three common types of stimulus-response procedures utilised in word association tests: verbal-verbal, verbal-written, and written-written.

From the early development of psycholinguistics, Kent-Rosanoff (10), Menninger (11), and Jung were three lists of stimulus words that were widely used by contemporary scholars (12). Jung's lexicon is frequently

used in clinical research. The number of studies that employ Jung's theory is not as numerous as those that employ Kent-Rosanoff's. It can be concluded that the Kent-Rosanoff glossary is the most frequently used to date.

Generally, studies that employed Kent & Rosanoff's list of 100 stimulus words made no modifications unless they were translated into another language, as is the case in this research. Kruse, Pankhurst, & Smith (1987) provided 12 stimulus words, while Ruke-Dravina (1971) provided only four. Kent & Rosanoff stimulus words are used in this study because they are the most widely used word lists in word association research. Additionally, Kent & Rosanoff's lexicon contains highly generic terms and is intended for native speakers (15). Because this study compares male and female respondents speaking their native tongues, the Kent-Rosanoff word list is deemed suitable because it is devoid of gender-biased terms.

According to Jung (1966), the underlying verbal habits are thought to be reflected in word association tests. They can be used for any type of research that requires information on a subject's vocabulary via natural responses. Researchers in clinical psychology, psychology, applied linguistics, linguistics, education and teaching, neurolinguistics, and psycholinguistics can all benefit from data obtained from word association tests. However, very few studies use data from word association tests to investigate gender language in a social context.

In linguistics, social research related to genders is still dominated by sociolinguistics, anthropology, dialectology, and related fields that study groups of individuals. Only a few researchers have looked at individual social implications. The topic to be investigated in this study is the psycholinguistic perspective on the differences or similarities between male's and female's responses. Do gender stereotypes function only in the social context, or have they progressed to the point of affecting individual thoughts and perceptions? There are a variety of reasons why it is necessary to address this issue. To begin, there are relatively few studies that explore this subject from an individual standpoint. Second, it is needed to contribute to the existing research on gender studies, particularly those focusing on a single case.

II. METHOD

This is a single case study with two individuals of opposite sexes as the research subjects. Anderson (1993) defined a single case study as an empirical investigation that delves deeply into a contemporary event and within its real-life context. Meanwhile, Yin (2009) stated that a single case study is "an event, an entity, an individual or even a unit of analysis". This description highlights the purpose of case studies: to provide a high level of information and interpretation. However, many objections have been directed against single case studies regarding the researcher's subjectivity, external validity, and methodological accuracy.

Regarding the criticisms, Willis (2014) discussed the variance between statistical and analytical generalisation. He stated that single case studies are undoubtedly less suitable for statistical generalisation but arguably maintain substantial value for analytical generalisation. The same argument also applies between explanatory and exploratory, or theory-testing and theory-building.

Thirty-four words were chosen from the 100 Kent-Rosanoff stimulus words based on their conceptual area category. The study's stimulus words are drawn from the conceptual areas of religion, general adjectives, activity, tools, body parts, and emotions. The word association test provides insight into various lexical dimensions that individuals possess. However, the researchers limit the discussion in this study to the choice of words that reflect the similarities and differences between men and women in their social contexts, specifically as members of society.

2.1 Subjects

In this study, one 31-year-old male (RS) and one 31-year-old female (KHY) subjects were chosen based on their degree of background resemblance. Both subjects came from quite comparable backgrounds in education, age, religion, occupation, residence, culture, and profession. The sole distinction is that the male subject completed his bachelor's degree in East Java, whilst the female subject completed hers in West Sumatra. This is done to ensure that the variations in responses reflect gender differences, rather than differences in background, to the greatest extent feasible.

2.2 Procedure

Subjects were asked for responses that detailed lexical access that led to the word connection the two made using the Kent-Rosanoff stimulus word. Interviews were used to administer the word association test. Subjects were instructed to provide as many responses (in the form of a single word) as possible to each stimulus word. The participant was given 30 seconds to reply to each stimulus word. A time gap of 30 seconds to 1 minute is provided between each stimulus word.

III. RESULTS AND DISCUSSION

A total of 758 responses were gathered from the two individuals, 419 from female and 339 from the male. This section will begin by explaining each of the conceptual areas examined. The findings are discussed in detail following a description of various responses by the two participants to a specific stimulus word in each conceptual area.

3.1 Conceptual Area

3.1.1 Religion

The difference between the two individuals was discovered to be that male subjects responded to the stimulus word "kiyai" with clothing-related terms ("robe", "cap", "ankle pants" ("*jubah*", "*peci*", "*celanajingkrang*")) while female responded with abstract terms ("old", "role model" ("*tua*", "*panutan*")). This distinction may be explained by the subject's psychological distance from the term "kiyai." Kiyai is a social title bestowed upon someone who is thought to be knowledgeable about Islam, wise, and whose presence is highly desired in society. Kiyais are an essential part of Javanese culture. Male participants attended undergraduate education in Surabaya, East Java, whereas female subjects attended in Padang, West Sumatra. It indicates that male subjects had a closer psychological distance, particularly spatial distance, as shown by apparel vocabulary and the number of response words to the stimulus word "kiyai."

According to Liberman, Sagristano, & Trope (2002), when a person is analysing something that is psychologically far from him, he prefers to utilise an abstract construct level. This psychological distance can take the forms of temporal (time) distance, geographic (physical) distance, social (self) distance, or hypothetical distance (possibility to occur). In other words, if a person is psychologically close to a concept, he or she will tend to reply in a less abstract manner.

Still regarding clothing-related responses, the male subject did not respond to the stimulus word "religion" with such responses, but the female subject responded with "praying robe" ("*mukena*"), "hijab", "khimar", and "abaya" (types of female Muslim clothing). This difference is associated with female participants' social distance from clothing when going about their everyday activities in response to the stimulus word "religion." In dressing and performing prayers, female subjects have more complete attributes than men.

3.1.2 General Adjective

In terms of individual differences, this study discovered that female subjects tended to link adjectives with something that is attached physically to her. She responded with "(close) eyes", "mind", "reason", "ankles", "voice", "heart", "feet", "body", "feeling", "height", "ego", "ear", and "memory" ("*pejam mata*", "*pikiran*", "*akal*", "*mata kaki*", "*suara*", "*hati*", "*kaki*", "*badan*", "*perasaan*", "*tinggi badan*". "ego", "*telinga*", "*ingatan*"). Male subject associated more general adjective concepts with things outside of themselves and only mention "mind", "attitude", "head", "physique" and "gaze" ("*pikiran*", "*sikap*", "*kepala*", "*fisik*", "*tatapan*") for internal notions. This difference indicates that the psychological distance of female subjects with the concept of general adjectives is closer spatially and socially than male subjects.

Negative emotions were also found in the list of response words. The case is found in the stimulus word "noisy" where the female subject responded with "hate", "confused", "annoying", "no manners", and "risih" ("*benci*", "*bingung*", "*mengganggu*", "*tidak tahusopansantun*", "*risih*"), while the male subject associated the word "noisy" with location, indicating there is no tendency of positive or negative emotions attached to the association he made.

3.1.3 Activity

The percentage of identical words (9.65%) in both subjects implies that men and women have similar concept understanding. According to the statistics obtained in the data, this study confirms Gosy & Kovacs (2002) finding that there is no statistically significant difference between men and women.

Regarding word choice, the female generated five negative emotional responses while the male generated one negative emotional response for the stimulus words "hope" and "work". Female subject responded with "confused", "clueless", "maybe", "dead" and "fail" ("*bingung*", "*entah*", " *mungkin*", "*mati*", "*fail*"), while male subject said "fake" ("*palsu*"). This result demonstrates that emotions have a significant impact on a person's mental vocabulary, particularly in female subjects. This research backs up Tyng, Amin, Saad, & Malik's (2017) findings showing emotions have a significant impact on cognitive processes, particularly those associated with perception, attention, learning, memory, logic, and problem-solving.

3.1.4 Tool

The large percentage of identical words (14.81%) between the two subjects implies that their baseline concept knowledge is comparable. Even though the total number of male's responses significantly exceeds the total number of female's responses, it is discovered that there are some reasonably fascinating disparities in the

word choice between the two participants, particularly for the stimulus words "hammer" and "scissors." The most notable distinction was between male and female responses to the stimulus word "hammer." Apart from the numerical difference (LK 17 PR 7), the vocabulary uttered by the male subject demonstrated a greater level of understanding, with terms such as "tools," "handles," and "hoof cutter" ("*perkakas*", "*gagang*", "*kuku kambing*") appearing in the lexicon.

When presented with the stimulus word "scissors" (LK 7 PR 16), female subjects demonstrated an understanding of scissors as a sewing tool by saying "sewing", "clothing", "stab", "torn", "tailor", "craft" ("*jahit*", "*baju*", "*tusuk*", "*sobek*", "*penjahit*", "*prakarya*"), whereas male subjects linked them with carpentry by responding with "tools", "cutters", "tweezers" ("*perkakas*", "*pemotong*", "*capit*"). According to Gossy & Kovacs (2002), female respondents wrote an average of 10.46 words for the stimulus word "clothes," while male subjects wrote 6.95 words. This variation in response is affected by each subject's background habits and preferences.

This data appears to confirm Gossy & Kovacs (2002) and Wyatt (1932) findings that men responded more frequently to the word "technique" than women. Kosmidis, Vlahou, Panagiotaki, & Kiosseoglou (2004) hypothesised that variations in male and female responses could be a result of distinct social roles. Men utilise tools more frequently than women, resulting in different reactions to the stimulus words "tool" and "fruit" for each individual.

3.1.5 Body Part

The low percentage of identical words (8.6%) implies a considerable difference in concept knowledge between the two subjects. A fascinating finding regarding the difference in responses between male and female subjects in this concept was that female subject mentioned disease-related terms more frequently ("sprain", "migraine", "brain cancer", "tumor", "surgery", "ulcer", "appendicitis") ("*keseleo*", "*migrain*", "*kankerotak*", "*tumor*", "*operasi*", "*maag*", "*usus buntu*"), whereas male subject mentioned only one similar word; "bloated" ("*mulas*"). Additionally, male subject frequently associate specific body parts with social duties in society, such as "protecting" and "assisting" ("*mengayomi*" dan "*penolong*") for the stimulus words "hand" ("*tangan*") as well as "leader," "examples", "exalted", "wise", and "willing to sacrifice" ("*pimpinan*", "*contoh*", "*ditinggikan*", "*bijaksana*", dan "*relaberkorban*") for the stimulus word "head" ("*kepala*"). Female subject responded similarly to the "head" stimuli, but with only two words, "boss" and "employer." In terms of language abilities, these results correspond with the findings of a 1994 study reporting that males outperformed girls in verbal analogies (25).

The female subject's disease-related responses on the concept of body parts are related to the psychological condition of women in general. Men tend to have more positive self-perceptions than women, particularly when it comes to physical appearance and health. Additionally, this demonstrates the psychological underpinning for more optimistic responses from the male shown in positive social role responses (26). Broadly speaking, the findings of the body parts conceptual area in this study reject Wyatt's (1932) claim that the difference between male and female responses is not substantial.

3.1.6 Emotion

The findings show that the conceptual knowledge of the two subjects related to emotion has a significant difference. Female subject associated the negative emotion of "fear" with things that made her fearful ("dark", "alone", "abandoned", "lost" ("*gelap*", "*sendiri*", "*ditinggal*", "*hilang*")), while male subject responded to these emotions with synonyms ("fear", "not daring", "embarrassed", "trembling", "nervous", "silent" ("*ketakutan*", "*tidak berani*", "*grogi*", "*gemetaran*", "*deg-degan*", "*diam*")). Likewise with positive emotions "comfort", female subject responded with things that made her comfortable ("couch", "house", "room", "view" ("*sofa*", "*rumah*", "*kamar*", "*pemandangan*")), while male subject responded with synonyms ("fun", "peace", "safe", "calm", "happy" ("*menyenangkan*", "*damai*", "*aman*", "*tenang*", "*senang*")).

This finding supports the theory of Mei-Rong & Hsieh (2016), which says that women tend to name objects and problems, while men mention words that are still within the scope of the emotions in the forms of synonyms or definitions. In self-evaluation research, women were more adept at recalling the obstacles they encountered than men (27). According to Beyer, this occurs psychologically because women tend to underestimate their own performance, which means that when they give an incorrect answer, they will recall it more easily than men, who are more confident.

IV. DISCUSSION

Male and female subjects differ and are similar in this conceptual area research due to psychological and social influences. Na (2016) discovered that men are more confident, adventurous, independent, frank, and objective, whereas women are reserved, gentle, and indecisive. These distinctions in psychological personalities affect how individuals act, think, and ultimately select words. According to Lakoff (1975), women's vocabulary

selection, syntactic organisation, and pragmatic differences all imply a distinct language style. This uniqueness is impacted by women's psychological characteristics, which are typically submissive, reluctant, and passive.

Psychological influences are prominent in the list of response words, particularly in the conceptual areas of general adjective, activity, body part, and emotion. There appears to be a difference in how the two subjects did their mental association to the stimulus. Female subject tended to take words personally by associating the stimulus with things related to herself. For example, in general adjective and emotion, women associate the word stimulus with themselves as an individual. Male, on the other hand, provided more neutral responses in the form of synonymous words. In the conceptual area of activity and body part, female subjects gave quite many negative responses, such as the name of the disease. However, male subject remained more neutral in his responses.

Social influences on subjects' responses are evident in the conceptual domains presented in this paper. Coates (2013) asserted that female subjects are more conservative in their language than male subjects. This characteristic results from societal needs and cultural beliefs, where the proportion of women who remain in their hometowns is bigger than the proportion of men who migrate. That is also the reason why dialectologists prefer females as their subjects. According to Wartburg, as Coates (2013) quoted, females are more conservative than males when it comes to language. The reason for this is that females nearly never leave their homes and have little opportunity to interact with outsiders.

Social impact is prevalent in the list of response words, notably in the conceptual area of religion and tools. The different responses to tools and religion shed light on the varied habits of men and women in society, as well as the two subjects' perspectives in light of social expectations.

This research demonstrated that the word association test instrument was capable of evaluating individual mental associations and characterising the social order that has taken root in the minds of community members, in this instance, two people of opposite sexes. The casual but time-limited word association interview procedure draws respondents' native language words, eliciting responses from their subconscious. These natural responses represent the subjects' unalterable way of thinking.

Additionally, this research found that gender differences do not exist solely in social situations but have influenced individuals' way of thinking, which is based on societal expectations on men's and women's and their different psychological traits. The subjects' association styles followed these societal standards as reflected in their responses to particular stimulus words.

V. CONCLUSION

Through the analysis above, we now understand the internal relationship between gender and language. It is highly beneficial for us to have a thorough understanding of gender and language in linguistics and social studies by considering a more detailed analysis using a single case study. One finding from this study is that male and female languages exhibit distinct traits in distinct conceptual areas. The word association test can be used to study these similarities and differences.

In conclusion, language is not only gender-specific but also influenced by social and psychological variables. Thus, gender, society, and psychology should be investigated more thoroughly in order to acquire a better understanding of gender and language. Further research should consider as many variables as practicable and employ complete research methods to gain a deeper understanding of this social phenomenon.

The researchers are aware that this study is far from being comprehensive. Given that very few studies have used word association tests to examine social groups, it offers a new opportunity to enrich the literature regarding collective thinking. The researchers expect that future studies could use the word association test to examine social groups with a bigger sample size to determine the tool's level of reliability.

ACKNOWLEDGEMENTS

This work was completed as part of a postgraduate program in linguistics that was entirely sponsored by the Indonesia Endowment Fund for Education (LPDP).

REFERENCES

- [1]. Social Order [Internet]. Oxford Reference. 2021 [cited 2021 Jul 15]. Available from: <https://www.oxfordreference.com/view/10.1093/oi/authority.20110803100515334>
- [2]. Coates J. *Women, Men and Language: A Sociolinguistic Account of Gender Differences in Language*. 3rd ed. New York: Routledge; 2013.
- [3]. Chaer A. *Psikolinguistik: Kajian Teoretik*. 2nd ed. Jakarta: PT Rineka Cipta; 2009.
- [4]. Lakoff R. *Language and Women's Place*. New York: Harper and Row; 1975.
- [5]. Thorne B, Henley N. *Language and Sex: Difference and Dominance (Series in Sociolinguistics)*. New York: Newbury House Publishers; 1975.
- [6]. Cameron D. Gender and language ideologies. In: Holmes J, Meyerhoff M, editors. *The Handbook of Language and Gender*. Oxford: Blackwell; 2003. p. 447–67.
- [7]. Sastra G. *Ekspresi Diri Laki-Laki dan Perempuan Ditinjau dari Fungsi Hemisfer Kiri dan Hemisfer Kanan*. In: *Konferensi dan*

- Kongres MLI. Lampung: University of Lampung; 2014.
- [8]. Maltz DN, Borker RA. A cultural approach to male-female miscommunication. In: Gumperz JJ, editor. *Language and social identity*. New York: Cambridge University Press; 1982.
- [9]. Ali L, Kridalaksana H, editors. *Kamus Besar Bahasa Indonesia (KBBI)*. 2nd ed. Jakarta: Balai Pustaka; 1997.
- [10]. Kent GH, Rosanoff AJ. A study of association in insanity. *Am J Insa*. 1910;37:37–96.
- [11]. Rapaport D, Gill M, Schafer R. *Diagnostic Psychological Testing*. Holt RR, editor. New York: International University Press; 1968.
- [12]. Keiser RE. *Jung's Word Association Test: Response Norms And Patterns of Disturbances*. Loyola University of Chicago; 1980.
- [13]. Kruse H, Pankhurst J, Smith MS. A multiple word association probe in second language acquisition research. *Stud Second Lang Acquis*. 1987;9(2):141–154.
- [14]. Ruke-Dravina V. Word associations in monolingual and multilingual individuals. *Linguistics*. 1971;74:66–85.
- [15]. Dóczy B, Kormos J. Longitudinal Developments in Vocabulary Knowledge and Lexical Organization [Internet]. Oxford: Oxford University Press; 2016. Available from: <https://books.google.co.id/books?id=2fvVCgAAQBAJ&printsec=frontcover&hl=id>
- [16]. Jung J. Experimental studies of factors affecting word associations. *Psychol Bull*. 1966;66(2):125–33.
- [17]. Anderson GJ. *Fundamentals of Educational Research*. Oxfordshire: Taylor & Francis Group; 1993.
- [18]. Yin RK. *Case Study Research: Design and Methods*. London: SAGE Publications Ltd; 2009.
- [19]. Willis B. The Advantages and Limitations of Single Case Study Analysis [Internet]. *E-International Relations*. 2014 [cited 2021 Jul 16]. Available from: <https://www.e-ir.info/2014/07/05/the-advantages-and-limitations-of-single-case-study-analysis/>
- [20]. Liberman N, Sagristano M, Trope Y. The effect of temporal distance on level of construal. *J Exp Soc Psychol*. 2002;38:523–535.
- [21]. Gosy M, Kovacs M. The Mental Lexicon: Results of Some Word Association Experiments. *Acta Linguist Hung* [Internet]. 2002;4(2):179–224. Available from: <https://www.jstor.org/stable/10.2307/26332374>
- [22]. Tyng CM, Amin HU, Saad MNM, Malik AS. The Influences of Emotion on Learning and Memory. *Front Psychol*. 2017;8:1454.
- [23]. Wyatt HG. Free Word Association and Sex Difference. *Am J Psychol* [Internet]. 1932;44(3). Available from: <https://www.jstor.org/stable/1415349>
- [24]. Kosmidis MH, Vlahou CH, Panagiotaki P, Kiosseoglou G. The verbal fluency task in the Greek population: Normative data, and clustering and switching strategies. *J Int Neuropsychol Soc*. 2004;10:164–172.
- [25]. Lim TK. Gender-related differences in intelligence: Application of confirmatory factor analysis. *Intelligence*. 1994;19:179–92.
- [26]. Lerner RM, Brackney BE. The importance of inner and outer body parts attitudes in the self-concept of late adolescents. *Sex Roles*. 1978;4:225–38.
- [27]. Beyer S. Gender Differences in Self-Perception and Negative Recall Biases. *Sex Roles*. 1998;38(1/2).
- [28]. Na W. Gender Differences in the Use of English Vocabulary Learning Strategies in Chinese Senior High Schools. *Stud Lit Lang*. 2016;12(4):58–62.