

The role of autobiographical memories in self perception of middle-aged adults

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ABSTRACT

Autobiographical memory and self are two intricately related psychological constructs, interacting through self-defining memory, relevant to one's interests, motives, and goals. The present study aimed at investigating the differences between two types of autobiographical memories, self-defining (SDM) and non-self-defining (NSDM), in middle-aged adults (N=30), with respect to the phenomenological characteristics, contents, the age of the participants at encoding, and personal significance of the memories, and to explore the nature of relationship between autobiographical memories and self-perception. The participants, sampled through convenience method, were first screened with the help of General Health Questionnaire-28 and Beck Depression Inventory-II in both the sections. They were then requested to recall SDMs and NSDMs, three of each type, from any period of their lives, and to rate each of the memories on 10 phenomenological dimensions (in Memory Experiences Questionnaire-Short Form), personal significance, and perceived competencies in 12 domains of self as reflected in the memories, and mention their age at incident. They also completed the Self-Perception Profile for Adults, which provided their general perceived competencies in the same 12 domains. The contents of the memories were further coded following Manual for Coding Events in Self-Defining Memories. Statistical analyses revealed significant differences between the two types of memories on certain phenomenological characteristics, on the interrelationship among these characteristics, contents, participants' age at incidents, personal significance, and participants' self-perceptions reflected in the memories. The present study validates the existence of SDMs as a special class of autobiographical memories with distinctive features and unique relationship with self-perception.

Keywords: *Autobiographical Memory, Self-Defining Memory, Self-Perception, Phenomenology, Memory Contents, Personal Significance, Middle Age*

It is commonly assumed that an individual's sense of who they are is intimately connected to their memories of their life. Brewer (1996) defines autobiographical memory as a memory for information related to self. The underlying presumption is that without memories of our past, we would be left with no sense of who we are. Remembering an event from one's life does not consist in "playing" or "reading" a literal record of the

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Received: August 02, 2020; Revision Received: September 12, 2020; Accepted: September 19, 2020

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past, it is a constructive process in which bits and pieces of information from various sources (e.g., perceptual, contextual, semantic, emotional details) are re-combined together in order to mentally reconstruct the past experience (Conway, 2005; Schacter & Addis, 2007). As a consequence, memory is prone to various kinds of errors, illusions, and distortions (Schacter, 1999).

This is particularly true for autobiographical memories as biases and distortions in the way we remember our personal past originate, in part, from self-related motives (D'Argembeau, Raffard, & Van der Linden, 2008). It is accepted that autobiographical memory and the self are two broad psychological constructs that interact, shape, delimit and reconstruct each other (e.g., Conway & Pleydell-Pearce, 2000; Conway, Singer, & Tagini, 2004; McAdams, 2004; Singer & Salovey, 1993). Autobiographical memories are investigated in several studies in terms of the information that they provide about the individual's self-understanding, identity, personality, traits, life goals, and personal needs.

Conway and Pleydell-Pearce (2000) considered autobiographical memory and the self as different but interrelated units of a Self Memory System (SMS). They explained the dynamics and the mechanism of this system based on a variety of studies from cognitive, clinical, personality, developmental and social psychology. The SMS has two major components: the long term self and the episodic memory system. The long term self includes all the information about the self. It has two components, autobiographical knowledge base and conceptual self. The autobiographical knowledge base consists of the factual knowledge of one's experiences organized in a hierarchical way, life time periods, general events and event specific knowledge. The conceptual self component of the long-term self is composed by self-schemas and one's beliefs, values, attitudes that are shaped by sociocultural factors.

The second major component of the Self Memory System, the episodic memory system invokes the feeling of reliving of an event specific knowledge (Conway, Singer, & Tagini, 2004). The encoding process of an experience as well as the retrieval of an autobiographical knowledge from autobiographical knowledge base and the matching of this knowledge by the appropriate feeling from episodic memory system, is managed by the processes of the working self. The working self process consists of a hierarchy of goals and subgoals that are retrieved from the conceptual self. The working self needs these set of goals in order to satisfy SMS's basic needs.

There are two basic needs, or in other words conflicting rules, of this system according to which the working self has to operate in order to maintain the well-being of the organism: the need for correspondence and the need for coherence. These needs are contradictory, so the system has to find an optimum solution in order to satisfy both. The need for correspondence refers to accuracy; any experience has to be encoded and retrieved in such a way that the memory for this event has maximum correspondence to reality. The need for coherence refers to self-coherence; any memory has to be encoded and retrieved in such a way that the memory is consistent with the self's current goals and beliefs.

Pillemer (2001) tried to explain the reason and the function of recalling and re-experiencing some momentous life events and also the impact of this recall on individuals' lives. A personal event memory is the episodic memory of a specific event which has taken place in a particular time and place. It contains personal circumstances such as the location of the event, the activity, and the feelings of the person. It evokes some sensory imagery which creates the feeling of re-experiencing the event. The person who recalls the memory believes

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that this event has actually happened. Pillemer argued that the reason why some specific episodic memories are vivid and have powerful impacts on individuals' lives is that they have some functions in terms of survival. He claimed that when an individual enters a new life situation for which there are no previously determined rules or scripts or routines, any particular event is attended carefully in order to obtain all possible information about this new life situation which could help survival. Later, when similar events are encountered by this individual, these events are thought, interpreted repeatedly and the first experience becomes more persistent in the memory.

These episodic events which persist in the memory for adaptive reasons provide individuals some life lessons or moral guidelines. These memories help to compose a personal belief system and they shape and remind individuals their long-term goals and life paths.

Through his categorization, Pillemer (2001) claimed that these momentous events are related to individual's long-term goals and plans about their future by shaping or symbolizing them. People understand the world and their own aspirations, values and capacities through these vivid, long lasting and repetitively recalled events. These representative events, are frequently remembered, as milestones, in order to shape the future choices and behaviours.

Singer and his colleagues (e.g., Singer & Moffit, 1991-1992; Singer & Salovey, 1993) were interested in the structural characteristics of some vivid and affectively intense memories which seem to have a strong impact on personality. He argued that individuals have their own collection of autobiographical memories through which they define themselves. He called these memories "self-defining memories (SDMs)". He examined self-defining memories in relation to goals, emotions, and personality.

Singer defined an SDM as a vivid autobiographical memory which is affectively intense, linked to other similar memories, repetitively recalled, and relevant to one's enduring concerns or conflicts (Singer & Moffit, 1991-1992; Singer, 1990; Singer & Salovey, 1993; Blagov & Singer, 2004). An SDM, among many other autobiographical memories, is the representative of a dense package of similar memories relevant to one's interests, motives, and goals. An SDM is related to a series of similar memories, therefore this memory is easily recalled when one encounters appropriate external or internal cues. It evokes stronger emotions than other memories due to the intense information that it contains about the attainment or non-attainment of a goal.

Very few studies have compared the characteristics of self-defining and non-self-defining memories (Sonmez, 2009). This lack of comparative studies between the two types of autobiographical memories created a remarkable gap in the literature. The present study attempted to bridge the gap by comparing the self-defining and non-self-defining memories on various dimensions, such as phenomenological characteristics, contents, age of encoding, and personal significance, pointed out as relevant to autobiographical memories in previous literature.

Although many studies investigated the relationship of autobiographical memories with various aspects of self, like personal strivings (Singer, 1994), goals and self-schemas (Sonmez, 2009), self-concept (Demiray & Bluck, 2011), self-esteem (Liao, Bluck & Westerhof, 2017) among others, their relationships with the self-perceived competence of individuals have not gained much attention of the researchers. In this context, the present study is unique in its approach to explore the relationship shared by autobiographical

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memories and self of middle-aged adults with respect to their perceived competences in various functional domains of self.

Another reason behind conducting the present study is the lack of empirical studies on self-defining memories in the Indian context.

MATERIALS AND METHODS

Objectives

To compare the two types of autobiographical memories (SDMs and NSDMs) with respect to:

- 10 different phenomenological characteristics of autobiographical memory separately as also respect to the relationships among them: (vividness, coherence, accessibility, time perspective, visual perspective, sensory details, emotional intensity, sharing, distancing, and emotional valence)
- general contents of memories (Life-threatening events, exploration/recreation, relationship, achievement/mastery, guilt/shame, alcohol/drug/tobacco use, or events not otherwise classified)
- to age of participants at the incidents described in the memories
- personal significance of memories
- participants' perceived competence in the following domains of self, as reflected in their memories (sociability, job competence, nurturance, athletic ability, physical appearance, adequacy as a provider, morality, household management, intimate relationship, intelligence, sense of humour, and global self-worth)
- relation between their perceived competence in the different domains of self, as reflected in their memories, and their general perceived competence in the respective domains.

Hypotheses

On the basis of existing literature and theoretical understanding, we propose the following hypotheses:

1. There would be significant differences between SDMs and NSDMs on various phenomenological characteristics, separately, as well as with respect to the patterns of relationships among the different phenomenological characteristics
2. There would be significant differences between SDMs and NSDMs with respect to contents, age at incidence, personal significance, and relationships with perceived competence in several domains of self

Participants

Thirty-six participants of age between forty and fifty years voluntarily participated in the present study. Of them, three participants were not included in the study since they had a history of anxiety disorder in the past, and three others were not included due to their scores of emotional distress and possible psychological morbidity on the General Health Questionnaire-28 (GHQ-28) were more than four. Therefore, the study was continued with the remaining thirty participants.

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The detailed sociodemographic profiles of the participants are tabulated in Table 1.

Table 1. Sociodemographic Profiles of the Participants

	<i>Total Sample</i>	<i>Male</i>	<i>Female</i>	<i>Value of Appropriate Test Statistic</i>	<i>p-value</i>
Cases [n(%)]	30 (100)	15 (50)	15 (50)		
Age [M(SD)]	46.7 (3.15)	46.0 (2.95)	47.4 (3.29)	1.23a	>0.05
Educational Qualification					
Higher Secondary Level	2	1	1	0.62b	>0.05
Graduate	18	8	10		
Post Graduate	10	6	4		
Relationship Status					
Unmarried	1	1	0	0.00b	>0.05
Married	28	14	14		
Widowed	1	0	1		
Divorced	1	0	1		
Nature of Family					
Nuclear	23	12	11	1.38b	>0.05
Joint	3	2	1		
Extended	4	1	3		
No. of Children					
None	5	2	3	1.34b	>0.05
One	19	11	8		
Two	6	2	4		
Occupational Status					
Non-working	3	0	3	1.72b	>0.05
Service	24	14	10		
Self-Employed	3	1	2		
Total SES Index Score ¹ [M(SD)]	28.17 (0.16)	28.071 (0.26)	28.27 (0.49)	1.20a	>0.05
History of Significant Event in Last 5 Years					
Reported	5	2	3	0.24b	>0.05
Not reported	25	13	12		
History of Significant Physical Illness					
Reported	2	1	1	0.00b	>0.05
Not reported	28	14	14		
History of Any Psychological Disorder					
Reported	0	0	0	0.00b	>0.05
Not reported	15	15	15		

¹Computed following the latest revision of Kuppaswamy's Socio-Economic Status Scale (Sharma., 2017)

n=No. of individuals; M=Mean; SD=Standard Deviation

^aIndependent Samples t-test

^bPearson's Chi Square Test

Materials

The following measures were used in the present study.

- 1. Information Schedule:** The Information Schedule was used to know the basic demographic details of the participants, like age, sex, relationship status, employment status, number of children, monthly family income, history of any significant life event in the last five years, history of any significant physical illness, and history of any psychological illness (along with the year of diagnosis and the duration of treatment).

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2. **General Health Questionnaire-28:** The General Health Questionnaire (GHQ) is a screening device for identifying minor psychiatric disorders in the general population and within community or non-psychiatric clinical settings such as primary care or general medical out-patients. Suitable for all ages from adolescent upwards (but not children), it assesses the respondent's current state and asks if that differs from his or her usual state, therefore being sensitive to short-term psychiatric disorders. Through factor analysis, the GHQ-28 has been divided into four subscales: somatic symptoms (items 1–7); anxiety/insomnia (items 8–14); social dysfunction (items 15–21), and severe depression (items 22–28) (Goldberg, 1978). Numerous studies have investigated reliability and validity of the GHQ-28 in various clinical populations, obtaining high test-retest reliability (0.78 to 0.9) (Robinson and Price, 1982), excellent interrater and intra-rater reliability (Cronbach's α 0.9–0.95) (Failde, Ramos, & Fernandez-Palacín, 2000), and high internal consistency (Failde, Ramos, & Fernandez-Palacín, 2000).
3. **Beck Depression Inventory-II:** The Beck Depression Inventory Second Edition (BDI-II) is a 21-item self-report instrument intended to assess the existence and severity of symptoms of depression as listed in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV; 1994). This new revised edition includes items indicating increases or decreases in sleep and appetite, items body image, work difficulty, weight loss, and somatic preoccupation were replaced with items labelled agitation, concentration difficulty and loss of energy, if that have been felt for the past two weeks. The BDI-II has a high internal consistency, with Cronbach's α of about 0.92 for outpatients and 0.93 for college students, along with high test–retest (administered 1 week apart) reliability of 0.93.
4. **Request for Autobiographical Memories:** This consists of requests for both SDMs and NSDMs
 - a. **Request for Self-Defining Memories:** The request for SDMs was the one used by Sutin and Robins in Memory Experiences Questionnaire (Sutin & Robins, 2007) that was adapted from Moffit and Singer's Instructions for the Self-Defining Memory Request (Moffit & Singer, 1991-92), as follows: *Please describe a memory that is personally meaningful to you. It can be either positive or negative, but it should convey the most important experience you have had that helps you to understand who you are and how you arrived at your current identity. It may be a memory about any kind of experience, but it should be something you have thought about many times and is still important to you, even as you are recalling it now. Please describe the memory in detail: what happened and when, whom you were with (if anyone), and how you felt or reacted.*

Please describe two other such memories.

The instructions were read aloud to the participant. As the participant recalled the memories, they were recorded on an audio recorder, with her/his consent. He/she was probed when required but with minimal conversation to keep the flow of the speech undisturbed.

- b. **Request for Non-Self-Defining Memories:** The request for NSDMs was generated by the researcher adapting it from Moffit and Singer's Instructions for the Autobiographical Memory Request (Moffit & Singer, 1991-92), as follows:

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Now please describe another memory of your life which you yourself was a part of. It can be either positive or negative. It should convey an important experience you have had but not necessarily helps you to understand who you are or how you arrived at your current identity. It may be a memory about any kind of experience, but it should be something you have thought about many times. Please describe the memory in detail: what happened and when, whom you were with (if anyone), and how you felt or reacted.

Please describe two other such memories.

The instructions were read aloud to the participant. As the participant recalled the memories, they were recorded on an audio recorder, with her/his consent. He/she was probed when required but with minimal conversation to keep the flow of the speech undisturbed.

5. Memory Experiences Questionnaire-Short Form (MEQ-SF): Sutin and Robins (2007) developed a psychometrically sound instrument, Memory Experiences Questionnaire (MEQ), consisting of 63 items to assess the phenomenological experience of autobiographical memories. The MEQ identifies 10 relevant dimensions on which a memory may vary: vividness, coherence, accessibility, time perspective, sensory details, visual perspective, emotional intensity, sharing, distancing, and valence. Luchetti and Sutin developed a short form for MEQ in 2015, consisting of 31 items, to use when time is limited, when several memories need to be elicited from the same individual, and also to conduct research on specific populations where literacy, attention and cognition are limited (Luchetti & Sutin, 2015). Each of the 10 scales of MEQ-SF had acceptable internal consistency (median alpha = .79), and each scale was highly correlated with its corresponding long-form scale on MEQ (median $r = .95$) (Luchetti & Sutin, 2015).

6. Self Perception Profile for Adults: Designed to measure adults' perceived sense of competence/adequacy in various domains of self. In addition to enhancing one's theoretical understanding of the dimensions of the self, the new scale was designed to meet several needs at the applied level. At the level of the individual adult, the scale has diagnostic utility and can be included in a battery of tests employed for clinical assessment. Its face validity enhances its credibility with clients and can be helpful in enabling them to identify dimensions of their lives which are problematic. The scale can also be employed as a measure of change during treatment.

The scale consists of 50 items., measuring the perceived competencies of adults in eleven domains of self (*sociability, job competence, nurturance, athletic abilities, physical appearance, adequacy as a provider, morality, household management, intimate relationship, intelligence, sense of humour*) as well as *global self worth*. Each of the eleven subscales contains four items, plus the global self-worth scale which contains 6 items. Within each subscale, half of the items are worded such that the first part of the statement reflects high competence or adequacy and the other half are worded such that the first part of the statement reflects low competence or adequacy. The reliabilities of the 12 subscales based on Cronbach's Alpha range from 0.73 to 0.91.

7. Manual for Coding Events in Self-Defining Memories: Event categories were developed by sorting a sample of 600 written self-defining memory narratives. About 80% of the narratives came from white college students (ages 18-22); about

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5% came from older adults (ages 40-88). The event categories reflect the primary concern that is emphasized in the narrative. The categories were developed to be mutually exclusive; each narrative is coded into only one category.

The event categories included: *life-threatening events (basic safety, mortality), recreation/exploration (exploration, fun), relationship (interpersonal relationship), achievement/mastery (effortful mastery, goal attainment), shame/guilt (doing right vs wrong) drug/alcohol/tobacco use (events centering such use), and events not otherwise classifiable.*

The authors also provided separate instructions for coding life-threatening events into sub-categories, but in the present study, no subcategorization of life-threatening events were followed.

Data collection

Data were collected from the participants individually in a quiet place comfortable for them. The data were collected in a particular order: a) Information Schedule, b) General Health Questionnaire and Beck Depression Inventory-II (BDI-II) as screening inventories, c) Request for 3 SDMs, d) Request for 3 NSDMs (requests for SDMs and NSDMs were counterbalanced across the participants), e) Rating the 6 memories on the Memory Experiences Questionnaire-Short Form (MEQ-SF) and supplementary statements, f) Self Perception Profile for Adults (SPP-A).

The participants were requested to recall multiple memories from the same type to prevent saliency effect of any particular memory, that might have crept in if a single memory of each type was called for.

- The SPP-A was always administered at the end of the study to prevent any effect of responding to the items regarding self-perception from influencing the autobiographical memories recalled by the participants.
- The memories recalled by each participant were recorded on an audio recorder with her/his consent. Responses on all other inventories were taken in pen and paper.
- There was no limitation of time. The participant was allowed to respond at her/his own pace. The average time taken for collecting data from each participant was about 90 to 120 minutes, allowing her/him breaks in the task when required.
- The participant was free to terminate her/his participation in the present study at any point of the study without showing any cause.
- The Participant was debriefed after her/his data collection session was over.
- The same procedure was followed in Section-II of the study, with caution about not causing any distress to the participants in the clinical group who participated in the study in presence of their respective consultant clinical psychologists.

Scoring

The responses of each participant on each of the inventories (BDI-II, MEQ-SF, AND SPP-A) were scored by the researcher, following the respective scoring manuals.

Coding for the contents of autobiographical memories

The general contents of the autobiographical memories were coded by the researcher and an expert following Manual for Coding Events in Self-Defining Memories (Thorne & McLean, 2001), the inter-rater correlation coefficient being .87. Any discrepancy between the two raters on the event code was resolved through discussion.

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Statistical analyses

All statistical analyses were performed using SPSS-16 after testing all for assumptions of statistics.

1. **Means and standard deviations** of the scores on ten different phenomenological dimensions (vividness, coherence, accessibility, time perspective, visual perspective, sensory details, emotional intensity, sharing, distancing, and emotional valence), age at incident, personal significance, participants' perceived competences in each of the 12 domains of self, as reflected in the autobiographical memories recalled, were computed separately for SDMs and NSDMs, along with participants' general perceived competences in each of the 12 domains of self.
2. **Pearson's Product Moment Correlation Coefficients** were computed among the scores on the 10 phenomenological dimensions, as well as between the scores of the participants' perceived competence in each of the domains of self, as reflected in their recalled SDMs, and their general perceived competence in the respective domains.
3. **Frequency distributions** of the different contents of the recalled autobiographical memories across SDMs and NSDMs
4. **Paired sample t-tests** were conducted to test for significant difference (if any), between SDMs and NSDMs with respect the ratings on various phenomenological characteristics, age of participants at incident, personal significance, and participants' ratings about their perceived competences in each of the 12 domains of self, as reflected in the autobiographical memories.

Variables

Autobiographical Memory: Autobiographical memory is a memory for information related to self (Brewer, 1996)

Self-Defining Memory: Self-Defining Memory is defined as a vivid autobiographical memory which is affectively intense, linked to other similar memories, repetitively recalled, and relevant to one's enduring concerns or conflicts (Singer & Moffit, 1991-1992; Singer, 1990; Singer & Salovey, 1993; Blagov & Singer, 2004).

Phenomenology: Phenomenology is what allows one to travel back in time and relive any experience that one consciously remembers (Tulving, 2002).

Phenomenological Characteristics of Memories: Phenomenological characteristics are what bring autobiographical memories back to life upon retrieval and make them so important in guiding the future goals and actions of individuals (Sutin & Robins, 2007). Sutin and Robins proposed of the following phenomenological characteristics: vividness, coherence, accessibility, time perspective, visual perspective, sensory details, emotional intensity, sharing, distancing, and emotional valence.

Contents of Memories: The major themes apparent in the memories (Thorne & McLean, 2001), viz., Life-threatening events, exploration/recreation, relationship, achievement/mastery, guilt/ shame, alcohol/ drug/tobacco use, or events not otherwise classified.

Self: the self consists of all statements made by a person, overtly or covertly, that include the words "I" "me," "mine," and "myself" (Cooley, 1902).

Domains of Self: The dimensions on which self may differ from person to person (Messer & Harter, 1986), viz., sociability, job competence, nurturance, athletic ability, physical appearance, adequacy as a provider, morality, household management, intimate relationship, intelligence, sense of humour, and global self-worth.

Self-Perception: It refers to the attitudes and opinions people develop by observing their own behaviour and drawing conclusions from it (Bem, 1967).

RESULTS AND DISCUSSION

Transformation of data

Three memories were recalled by each participant for each type of memory. Hence, the mean of the scores of each participant on a particular variable (except content, where frequencies were considered as scores) for the three memories of a type was considered as her/his score on that variable for that type of memory. This method was adopted from that employed by Moffit and Singer in one of their studies on SDMs where the mean rating of 10 memories of a participant on a given dimension was treated as the rating for each of the 54 participants on that dimension (Moffit & Singer, 1994).

Preliminary analyses

The scores on all variables were compared between males and females. Since independent samples t-test, as well as Pearson's Chi Square tests (for contents) yielded no significant differences ($p > 0.05$) between the two sexes on any of the variables, sex was not considered as an independent variable for further Subsequent main analyses were conducted on the scores of both the sexes together.

The main findings

Comparison between SDMs and NSDMs with respect to phenomenological characteristics

The results of the present study reiterate the existence of SDM as a distinct type of autobiographical memories. As observed in Table 2, the two types of recalled memories have been found to differ, as we hypothesized, on certain phenomenological dimensions, viz., vividness, coherence, accessibility, visual perspective and emotional intensity (refer to Table 2). SDMs have been found to be more vivid, less coherent, more accessible, more experienced from the first-person perspective, more emotionally intense, and less distant from the current sense of self than NSDMs. The findings of the present study are in accordance with the definitive features of SDM (Moffit & Singer, 1991-92; Singer & Salovey, 1993).

The greater emotional intensity of SDMs revealed in this study validate the similar findings in previous such studies (Hess, 2009; Luchetti, Rossi & Montebanocci, 2016;). A study by Sonmez also revealed similar findings: SDMs were rated by the participants as affectively more intense, more vivid, more frequently recalled, and more linked to similar memories (Sonmez, 2009). However, the results of the present study partially replicate those obtained by Montebanocci, Luchetti and Sutin where they found that SDMs were more vivid, more coherent, richer in sensory details, clearer in time perspective, more emotionally intense, more likely to be seen from first-person perspective, and more likely to be shared with other people (Montebanocci et al., 2014).

The findings that compared to NSDMs, SDMs tended to be experienced more from a 1st person or "field" perspective and that they were perceived to be closer to the current sense of self by the participants of the present study may reflect that the participants could identify with their own selves reflected in their SDMs more deeply than those reflected in their NSDMs.

Two of the dimensions- vividness and emotional intensity- are directly comparable to those obtained in the studies conducted by Moffit and Singer (1991-92). Two other dimensions— coherence and accessibility- may also be compared indirectly with the dimensions of linkage to other similar memories and rehearsal respectively. According to the operational definition, a coherent memory is one involving a logical story in a specific time and place

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rather than fragments of the original experience or a merging of many similar experiences (Sutin & Robins, 2007). The relative incoherence of the SDMs may therefore indicate their *relative generality* and *merging with similar experiences* rather than *lack of sequential clarity*. Thus, the results of the present study are in line with the previous findings about the linkage of SDMs with similar memories and their relative generality (Moffit & Singer, 1991-92; Sonmez, 2009).

Moreover, the rehearsal dimension, though not assessed directly, was assessed with the help of the accessibility subscale, with the underlying assumption that more rehearsed memories are more likely to be accessible.

These phenomenological characteristics have been linked to a number of psychological processes, such as emotion regulation (e.g., D'Argembeau & Van der Linden, 2006), psychological distress (e.g., Sutin & Gillath, 2009), and clinical disorders (Sumner, Wong, Schetter, Myers, & Rodriguez, 2012; Williams, Barnhofer, Crane, Herman, Raes, Watkins, & Dalgleish, 2007). Individual differences in autobiographical memory phenomenology have also been linked to personality (e.g., Rasmussen & Bernsten, 2010; Sutin & Robins, 2007). As such, the phenomenology of memory reflects both the retrieval style and characteristics of the memory retrieved. The richer phenomenology of SDMs, hence, may reflect their central role for the current self and identity compared to NSDMs. A neurocognitive understanding of the phenomenological characteristics of the two types of memories may be explored to have a different perspective on the relationship between these characteristics with the psychological processes.

Table 2. Comparison between the ratings of participants (N=30) on the 10 phenomenological dimensions of SDMs and NSDMs measured by MEQ-SF

Phenomenological Dimension	SDM M (SD)	NSDM M (SD)	t ₍₂₉₎
Vividness	4.39(0.37)	3.95(0.61)	3.05*
Coherence	3.39(0.58)	3.99(0.47)	4.73**
Accessibility	4.40(0.49)	3.51(0.68)	5.15**
Time Perspective	3.51(0.67)	3.48(0.63)	0.23
Sensory Details	3.19(0.62)	3.19(0.52)	0.00
Visual Perspective	4.26(0.43)	3.82(0.50)	5.35**
Emotional Intensity	4.12(0.44)	3.38(0.91)	4.16**
Sharing	2.81(0.69)	2.97(0.61)	0.98
Distancing	2.57(0.62)	3.65(0.63)	6.77**
Emotional Valence	3.17(1.00)	2.98(1.20)	0.63

SDM= Self-Defining Memory; NSDM= Non-Self-Defining Memory; MEQ-SF= Memory Experiences Questionnaire-Short Form; M=Mean; SD= Standard Deviation; t(29)= t statistic at 29 degrees of freedom

* significant at 0.05 level of significance

** significant at 0.01 level of significance

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Comparison between SDMs and NSDMs with respect to the relationships among phenomenological characteristics

Table 3. Intercorrelations (*rs* at *df* =28) among the 10 phenomenological dimensions of SDMs and NSDMs measured by MEQ-SF

			1	2	3	4	5	6	7	8	9	10
1	Vividness	SDM		0.59**	0.31	0.27	0.31	-0.08	0.31	0.34	0.13	0.20
		NSDM		0.34	0.53**	0.35	0.09	-0.13	0.31	-0.18	0.21	-0.16
2	Coherence	SDM			0.29	0.52**	0.73**	0.10	0.13	0.12	-0.04	0.29
		NSDM			0.24	0.60**	0.19	0.01	0.06	-0.17	-0.20	-0.22
3	Accessibility	SDM				0.47**	0.44**	-0.08	0.41*	0.15	0.38*	0.36
		NSDM				0.19	-0.08	0.29	0.43*	0.05	0.10	-0.26
4	Time Perspective	SDM					0.74**	-0.05	0.23	0.28	-0.02	0.29
		NSDM					0.52**	0.10	0.26	-0.26	-0.32	-0.20
5	Sensory Details	SDM						0.03	0.15	0.27	0.02	0.42*
		NSDM						0.17	0.35	0.03	-0.48**	0.09
6	Visual Perspective	SDM							0.02	-0.14	-0.01	0.15
		NSDM							0.32	0.10	-0.48	-0.14
7	Emotional Intensity	SDM								-0.23	0.23	0.07
		NSDM								-0.28	-0.21	-0.07
8	Sharing	SDM									-0.23	0.53**
		NSDM									-0.14	-0.13
9	Distancing	SDM										-0.18
		NSDM										-0.04
10	Emotional Valence	SDM										
		NSDM										

SDM= Self-Defining Memory; NSDM= Non-Self-Defining Memory; MEQ-SF= Memory Experiences Questionnaire-Short Form;

The significant z-values after Fisher's z-transformation are given in parentheses

* significant at 0.05 level of significance

** significant at 0.01 level of significance

The intercorrelations among the ten phenomenological dimensions of autobiographical memories were investigated in the present study (refer to Table 3) for SDM and NSDMs separately. Irrespective of their types, the more accessible memories have been found to be richer in temporal details as well as emotional intensity. It has also been observed that the more coherent memories are more likely to be richer in temporal details.

However, it is more interesting in the context of the present study that, as we expected, certain phenomenological dimensions have been observed to be significantly correlated with each other for one type of memory while not for the other type. For instance, the results of the present study reveal that more coherent SDMs are more vivid and richer in sensory details, that is, they are more likely to be “re-experienced” by the individuals when recalled.

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Also, more accessible SDMs have been found to be richer in both temporal and sensory details, and this may be indicative of the individuals' confidence in recalling the memories accurately. Another interesting finding is that more positive memories are more likely to contain greater sensory details which may be due to the possibility that negative SDMs, being more threatening for an individual's self, the individual tends to invest more attention in the coping strategies rather than the relatively less important sensory details of the memories. One more striking feature of SDMs is that the more positive memories are more likely to be shared, or, in other words, individuals usually do not prefer to share negative memories representing their selves with others. This may also be a strategy to cope with negative, self-relevant memories of one's life. None of these intercorrelations have been observed for the NSDMs. NSDMs, on the other hand, are characterized by unique patterns of relationships among the phenomenological characteristics, not shared by the SDMs: more distant an NSDM is from the current self-concept of an individual, more likely they are to contain fewer sensory details and to be experienced from a 3rd person perspective.

These differences in the intercorrelations also hint at the phenomenological differences between the SDMs and NSDMs, thereby reiterating the existence of SDMs as a distinct type of autobiographical memories.

The moderate intercorrelations among the phenomenological dimensions of autobiographical memories may be a result of the fact that the dimensions are based on the self-reports about the same memories. Similar results of moderate to high intercorrelations among these same dimensions were obtained by Sutin and Robins when they attempted to construct the Memory Experiences Questionnaire in 2007 (Sutin and Robins, 2007).

The present study, though conducted on a relatively small number of individuals, hints at the unique patterns of the phenomenological characteristics observed in SDMs. Further research on a large sample of individuals is required to explore these relationships at a deeper level, and to generalize the findings.

The moderate intercorrelations among the phenomenological dimensions of autobiographical memories may be a result of the fact that the dimensions are based on the self-reports about the same memories. Similar results of moderate to high intercorrelations among these same dimensions were obtained by Sutin and Robins when they attempted to construct the Memory Experiences Questionnaire in 2007 (Sutin and Robins, 2007).

Comparison between SDMs and NSDMs with respect to contents

Table 4. Frequencies, percentages, and ASRs of the general contents of memories across SDMs and NSDMs

		Life Threatening Events	Exploration/ Recreation	Relationship	Achievement	Guilt/ Shame	Not Otherwise Classified	Total
SDM	<i>Freq</i>	14	3	15	42	16	0	90
	<i>%</i>	7.8	1.7	8.3	23.3	8.9	0.0	50.0
	<i>ASR</i>	(-2.2)	(-3.0)	(-0.6)	(3.3)	(2.3)	(-2.0)	
NSDM	<i>Freq</i>	26	15	18	21	6	4	90
	<i>%</i>	14.4	8.3	10.0	11.7	3.3	2.2	50.0
	<i>ASR</i>	(2.2)	(3.0)	(0.6)	(-3.3)	(-2.3)	(2.0)	
Total	<i>Freq</i>	40	18	33	63	22	4	180
	<i>%</i>	22.2	10.0	18.3	35.0	12.2	2.2	

$$X^2_{(5)}=27.42^{**}$$

SDM=Self-Defining Memory; NSDM=Non-Self-Defining Memory;

ASR=Adjusted Standardized Residual

The table entries in bold have $ASR > |2|$

**significant at 0.01 level of significance

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Previous literature testifies to the fact that content is an important dimension of SDM (Blagov & Singer, 2004). In the present study also, in accordance of our hypothesis, the SDMs and the NSDMs of the participants have been found to differ significantly with respect to the general contents of the memories (refer to Table 4). The contents of SDMs are more relevant to events related to achievement/mastery and to guilt/shame, whereas the contents of NSDMs are more relevant to life-threatening events and exploratory/recreational events. The events relevant to relationship were distributed more or less equally among the two types of memories. That is, the memories of experiences related to achievements in life as well as those of experiences related to guilt or shame may be said to define the self of adults more than the memories of life-threatening events, exploratory or recreational events or events related to important relationships.

It is interesting to note here that both of the two most prominent categories of events prevalent in the SDMs of the participants are characterized by the *self-conscious emotions*. Self-conscious emotions play a central role in motivating and regulating almost all of people's thoughts, feelings, and behaviours (Tangney & Fischer, 1995). Embarrassment, guilt, pride, and shame drive people to work hard in achievement and task domains (Weiner, 1985), and to behave in moral, socially appropriate ways in their social interactions and intimate relationships (Baumeister, Stillwell, & Heatherton, 1994). SDMs are characterized of being affectively intense as well as connected to an enduring concern or unresolved conflict (Singer & Moffitt, 1991-1992; Singer & Salovey, 1993). Thus, self-conscious emotions may well be conceptualized as one of the pillars in determining which of the autobiographical memories of a person may be potential enough to become self-defining of the person, as reflected in the results of the present study.

Comparison between SDMs and NSDMs with respect to age at incident

Table 5. Comparison between AAI of participants (N=30) for SDMs and NSDMs

	<i>SDM</i> <i>M (SD)</i>	<i>NSDM</i> <i>M (SD)</i>	<i>t</i> ₍₂₉₎
Age at incident	26.52 (4.98)	22.72 (7.92)	2.09*

SDM= Self-Defining Memory; *NSDM*= Non-Self-Defining Memory; *AAI*=Age at incident; *M*=Mean; *SD*= Standard Deviation; *t*₍₂₉₎= *t* statistic at 29 degrees of freedom

* significant at 0.05 level of significance

The age of the participants at the incidence of the events described in the memory has also been found to differ significantly across the two types of memories (refer to Table 5), as we expected. However, it is important to note here that the mean ages of encoding for both types of autobiographical memories lie within the second and the third decades of one's life. This supports the evidence of *reminiscence bump* in the autobiographical memories of adults. Reminiscence bump is the period of life from which, in a free recall task, people produce the most memories. In the present study, the participants were free to recall both types of memories from any period of their life. Although the SDMs were supposed to convey information relevant to one's current identity while the NSDMs were not supposed to do so (as per the instructions), all of the six recalled memories may be assumed to be relatively more important in their life than the other innumerable memories that were not recalled at that moment. This may be because when asked to recall only a few memories from the entire life, people, in general, tend to recall memories that they consider to be more important than others. Therefore, it is not unnatural that even the NSDMs that were recalled by the participants also show a reminiscence bump like the SDMs.

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However, the significant difference in age at incidence of the events described in SDMs and NSDMs indicate that there may be some difference in the encoding of those events as two distinct types of memories. Considering the means of SDMs and NSDMs, it can be said that the episodes mentioned as SDMs have been encoded at a somewhat higher age than those mentioned as NSDMs. Also, considering the standard deviations, it may be observed that SDMs are more concentrated in the 20s of the participants, whereas NSDMs extend back in the late teens. These findings hint that the individuals must cross the threshold of a certain age for the episodes occurring in that period of their life to be strongly linked with their sense of self and identity, and encoded as SDMs.

As Rubin and colleagues point out, crucially, the reminiscence bump is based robustly on the age of the individual at the time of encoding and not on the age of the memories, so that artefactual, retrieval-based accounts of this finding can be rejected (Rubin, Wetzler, & Nebes, 1986). The present study, however, is unable to verify this finding as the participants in this study represented only one age group (middle adulthood). Further research in this area with individuals of varied age groups and memories from different periods of their lives is required for deeper exploration of this issue.

There are several plausible explanations for the high level of memories from the reminiscence bump period: a peak in mental efficiency during early adulthood; cultural life scripts containing positive events (e.g., marriage) that are expected to occur in early adulthood (Berntsen & Rubin, 2002; Dickson, Pillemer, & Bruehl, 2011); identity formation or life story accounts that emphasize the importance of adolescence and early adulthood for personal development (Conway & Pleydell-Pearce, 2000; McAdams, 2001); a cognitive mechanisms account that focuses on the novelty, distinctiveness, and elaborative processing of events (Pillemer, 2001; Cohen & Faulkner, 1988; Pillemer, Goldsmith, Panter, and White, 1988); and a transition-based account that attributes the memorability of events to shifts in material circumstances and psychological outlook (Svob & Brown, 2012). In support of the cognitive theory, Cohen and Faulkner (1988) found that 93% of vivid life memories were of either first-time experiences or of unique events. Similarly, Pillemer et al. (1988) observed high memorability of first-time experiences, with 41% of participants' memories for their first year at college coming from their first month of coursework. According to Conway and colleagues (Conway, 2005; Conway & Pleydell-Pearce, 2000; Rathbone, Moulin, & Conway, 2008), many memories from this period form an enduring relation with the self, becoming self-defining experiences and preserving self-coherence and self-continuity over time.

Comparison between SDMs and NSDMs with respect to personal significance of the memories

Table 6. Comparison between Personal Significance of participants' (N=30) SDMs and NSDMs

	<i>SDM M (SD)</i>	<i>NSDM M (SD)</i>	<i>t₍₂₉₎</i>
Personal Significance of Memories	4.74(0.29)	2.01(0.56)	22.98**

SDM= Self-Defining Memory; NSDM= Non-Self-Defining Memory;

M=Mean; SD= Standard Deviation; t(29)= t statistic at 29 degrees of freedom

*** significant at 0.01 level of significance*

As revealed by the results of the present study (refer to Table 6), SDMs have been found to be more personally significant in the participants' lives than NSDMs, as we hypothesized. Let us reconsider the phenomenological characteristics of the two types of memories at this

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point of the discussion. These findings convey the fact that SDMs are not only more vivid and more accessible in nature, but they are more emotionally intense, more likely to be experienced from the 1st person perspective, and closer to the current sense of self as well. In this context, two terms may be discussed: *salience* and *self-relevance*. Whereas salience is considered simply as a bottom-up propagation of sensory information sufficient for allocation of attention, self-relevance is defined as top-down process and generated by two integrative sub-systems, one that orients pre-attentive biasing information (e.g. anticipatory or mnemonic) to salient or explicitly self-relevant phenomena, and another that engages introspective processes (e.g. self-reflection, evaluation, recollection) either in conjunction with or independent of the former pathway (Schmitz & Johnson, 2007).

While the greater vividness and accessibility of SDMs hint at their salience in the participants' lives, their greater levels of emotional intensity to those experiences, closeness of the experiences to the current sense of self, and the 1st person perspective of the experiences compared to the NSDMs are indicative of their self-relevance for the participants. Thus, SDMs may be conceptualized as autobiographical memories that not only hold salience in one's life but rather, as those with a greater self-relevance for the persons.

Comparison between SDMs and NSDMs with respect to perceived competence of the participants in the different domains of self, as reflected in the memories

Table 7. Comparison between the ratings of participants (N=30) about their perceived competence in each of the 12 domains of self (obtained from SPP-A) with respect to SDMs and NSDMs

<i>Dimension of Self-Perception</i>	<i>SDM M (SD)</i>	<i>NSDM M (SD)</i>	<i>t₍₂₉₎</i>
Sociability	3.36 (0.59)	3.33 (0.48)	0.21
Job Competence	3.69 (0.65)	3.16 (0.36)	4.00**
Nurturance	3.62 (0.55)	3.28 (0.32)	3.47**
Athletic Abilities	3.09 (0.23)	3.04 (0.17)	1.00
Physical Appearance	3.01 (0.06)	3.06 (0.18)	1.44
Adequacy as a Provider	3.76 (0.74)	3.17 (0.44)	4.81**
Morality	3.63 (0.74)	3.16 (0.55)	3.04*
Household Management	3.17 (0.34)	3.03 (0.24)	2.02
Intimate Relationship	4.03 (0.69)	4.80 (0.50)	1.59
Intelligence	3.90 (0.80)	3.14 (0.37)	4.41**
Sense of Humour	3.01 (0.06)	3.14 (0.26)	2.69*
Global Self Worth	4.38 (0.85)	3.52 (0.63)	4.70**

SDM= Self-Defining Memory; NSDM= Non-Self-Defining Memory; SPP-A=Self-Perception Profile for Adults; M=Mean; SD= Standard Deviation; t₍₂₉₎= t statistic at 29 degrees of freedom

** significant at 0.05 level of significance ** significant at 0.01 level of significance*

The participants in the present study perceived themselves to be more competent in the domains of job competence, nurturance, adequacy as a provider, morality, intelligence, and global self-worth, and less competent in sense of humour with respect to the events they recalled as SDMs than to those they recalled as NSDMs (refer to Table 7). It is somewhat clear from these results that the participants did not have an equally competent perceptions of their self-images, reflected in the two types of autobiographical memories. This may be the result of the *above average effect*, a self-serving cognitive bias held by many people due to which they believe that they are better than the average person on almost every dimension imaginable (Alicke, Vrendenburg, Hiatt & Govorun, 2001), that may have led the participants to rate their competence in different domains of self in the memories that are most representative of themselves, i.e., the SDMs, than in the NSDMs.

General perceived competence of the participants in the different domains of self

Table 8. Means and standard deviations of general perceived competence of the participants (N=30) in each of the 12 domains of self as measured by SPP-A (sorted in descending order of means)

<i>Dimension of Self-Perception</i>	<i>M (SD)</i>
Nurturance	3.46 (0.61)
Physical Appearance	3.40 (0.56)
Global Self Worth	3.28 (0.45)
Morality	3.25 (0.66)
Intelligence	3.04 (0.53)
Sense of Humour	3.02 (0.64)
Job Competence	3.08 (0.71)
Adequacy as a Provider	2.91 (0.61)
Sociability	2.88 (0.76)
Household Management	2.92 (0.92)
Intimate Relationship	2.63 (0.72)
Athletic Abilities	2.58 (0.77)

M=Mean; SD= Standard Deviation; SPP-A=Self-Perception Profile for Adults

It can be observed from Table 8 that on average, the participants of the present study perceived themselves to be most confident about their nurturant abilities and physical appearance, and least confident about their intimate relationships and athletic abilities.

Relationship between the participants' perceived competence in the domains of self, as reflected in SDMs and NSDMs, and their general perceived competence in the same domains.

Table 9. Values of rs for general perceived competence, and perceived competence of the participants (N=30) with respect to SDMs and NSDMs for each of the 12 domains of self (obtained from SPP-A)

<i>Dimension of Self-Perception</i>	<i>SDM r(30)</i>	<i>NSDM r(30)</i>	<i>P values of Z(30)</i>
Sociability	.38*	.10	>0.05
Job Competence	.07	.17	>0.05
Nurturance	.36*	.11	>0.05
Athletic Abilities	.16	.07	>0.05
Physical Appearance	.12	.09	>0.05
Adequacy as a Provider	.10	.24	>0.05
Morality	.17	.02	>0.05
Household Management	.37*	.19	>0.05
Intimate Relationship	.13	.04	>0.05
Intelligence	.36*	.17	>0.05
Sense of Humour	.07	.12	>0.05
Global Self Worth	.06	.11	>0.05

r(30)= Pearson's Product Moment coefficient at 30 degrees of freedom

SDM= Self-Defining Memory; NSDM= Non-Self-Defining Memory; SPP-A=Self-Perception Profile for Adults;

** significant at 0.05 level of significance*

The participants' perceived competences in the domains of job competence, nurturance, household management and intelligence, as reflected in their SDMs have been found to be moderately positively correlated with their general perceived competence in these domains, but the correlation coefficients were found to be significant in none of the domains of self for NSDMs (refer to Table 9). In other words, the participants who generally perceived

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themselves to be sociable, nurturing, competent in household management, and intelligent were more likely to rate themselves to be competent in these same domains of self with respect to the events they described in their memories. This may reflect the presence of *self-event connections* linking the remembered *episodic memories* to the *long-term self*, as predicted by the *Dual Memory System* (Conway & Singer, 2011). However, contrary to our expectation, no significant differences were found between *rs* of SDMs and NSDMs in any domain of self.

Limitations, Implications, and Scope for Further Research

The present study suffers from the following limitations, a knowledge of which may be useful in planning future research on the theme. Firstly, the present study involved a small sample, and of a particular age group and socio-economic status. Future studies should be conducted involving larger sample. Secondly, the accuracy of the recalled memories could not be checked as no relatives/informants of the participants were interviewed. However, the focus of the present study was the memories of the events *recalled* by the participants rather than the accuracy of the actual events that had *happened*. And lastly, it is acknowledged that the design is sensitive to internal validity problems due to maturation and history effects which would have been better controlled by involving two separate group recalling the two types of memories.

Despite the research limitations, the results reached have useful clinical as well as research implications. This study may help in a better understanding of the self of an individual indirectly through the various dimensions of self-defining memories, which is difficult to explore directly. This would be particularly useful in clinical setup, where a clinician spends a lot of time listening to the personal experiences, or in other words, autobiographical memories of the client. By identifying the self-defining ones among these memories from the knowledge about the phenomenological dimensions, contents, age of encoding, personal significance and the like, a better understanding of the self-concept of the client may be reached. This, in turn, may facilitate the formulation of psychopathology as well as the therapeutic interventions to help the client.

The present study opens scopes for a plethora of future research on this topic. Research may be conducted to compare SDMs with other types of memories like flashbulb memories, emotional memories etc. Further, SDMs may be studied with the help of qualitative paradigm to understand the role of narratives in self and autobiographical memories. The role of SDMs in different clinical disorders (e.g. mood disorders, anxiety disorders, dissociative disorders, personality disorders etc.) may also be investigated.

CONCLUSION

Review of the previous literature reveals the presence of self-defining memories as a special type of autobiographical memories, that has certain features distinguishing it from other autobiographical memories (Moffit & Singer, 1991-1992; Singer & Salovey, 1993). The present study also reiterates this proposition in the Indian context. Significant difference has been observed between SDMs and NSDMs with respect to phenomenological dimensions, contents, age at incidence, and personal significance. Starting with the most explicitly manifested dimensions of autobiographical memory narratives, i.e., the phenomenological characteristics, the present study attempted at reaching the innermost construct embedded in autobiographical memories, i.e., the relationship of these memories with self. It is here that the understanding of self-defining memories actually begins. As a first of its kind, this study investigated the relationship of autobiographical memories with self-perception, precisely,

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with the perceived competence in different domains of self, and found significant relationships in certain domains. The present study, therefore, enriches the corpus of knowledge about the intricate relationships between autobiographical memories and selfhood, and invites further research in this area.

REFERENCES

- Alicke, M. D., Vredenburg, D. S., Hiatt, M., & Govorun, O. (2001). The "better than myself effect. *Motivation and Emotion*, 25(1), 7-22. doi: <http://dx.doi.org/10.1023/A:1010655705069>
- Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin*, 115(2), 243-267. doi: <http://dx.doi.org/10.1037/0033-2909.115.2.243>
- Bem, D. J. (1967). Self-Perception: An Alternative Interpretation of Cognitive Dissonance Phenomena. *Psychological Review*, 74, 183-200.
- Berntsen, D., & Rubin, D. C. (2002). Emotionally charged autobiographical memories across the life span: The recall of happy, sad, traumatic and involuntary memories. *Psychology and Aging*, 17(6), 636-652. doi: <http://dx.doi.org/10.1037/0882-7974.17.4.636>
- Brewer, M. B., & Gardner, W. (1996). Who is this "We"? Levels of collective identity and self. *Journal of Personality and Social Psychology*, 71(1), 83-93. doi: <http://dx.doi.org/10.1037/0022-3514.71.1.83>
- Cohen, G., & Faulkner, D. (1988). Life span changes in autobiographical memory. In M. M. Gruneberg, P. E. Morris, & R. N. Sykes (Eds.). *Practical aspects of memory: Current research and issues*, Vol. 1. *Memory in everyday life*. Oxford, England: John Wiley & Sons.
- Conway, M. A. (2005). Memory and the Self. *Journal of Memory and Language*, 53(4), 594-628.
- Conway, M. A., & J. A. & Tagini, A. (2004). The Self and Autobiographical Memory: Correspondence and Coherence. *Social Cognition*, 22(5), 491-529.
- Conway, M. A., & Pleydell-Pearce, C. W. (2000). The construction of autobiographical memories in the self-memory system. *Psychological Review*, 107(2), 261-288.
- D'Argembeau, A., Raffard, S., & Van der Linden, M. (2008). Remembering the past and imagining the future in schizophrenia. *Journal of Abnormal Psychology*, 117(1), 247-251.
- Demiray, Burcu & Bluck, Susan. (2011). The relation of the conceptual self to recent and distant autobiographical memories. *Memory*, 19, 975-92. 10.1080/09658211.2011.626427.
- Dickson, R. A., Pillemer, D. B., & Bruehl, E. C. (2011). The reminiscence bump for salient personal memories: Is a cultural life script required? *Memory & Cognition*, 39(6), 977-991. doi: <http://dx.doi.org/10.3758/s13421-011-0082-3>
- Failde, I., Ramos, I. and Fernandez-Palacín, F. (2000) Comparison between the GHQ-28 and SF-36 (MH 1-5) for the Assessment of Mental Health in Patients with Ischaemic Heart Disease. *European Journal of Epidemiology*, 16, 311- 316.
- Goldberg, D. (1978) *Manual of the General Health Questionnaire*. NFER-Nelson, Windsor.
- Hess, R. K. (2009). *The Psychophysiology of Self-Defining Memories*. Psychology Honors Papers. 6. doi: <http://digitalcommons.conncoll.edu/psychhp/6>
- Jefferson A. Singer & Martin A. Conway (2011) Reconsidering therapeutic action: Loewald, cognitive neuroscience and the integration of memory's duality, *The International Journal of Psychoanalysis*, 92:5, 1183-1207, DOI: 10.1111/j.1745-8315.2011.00415.x
- Liao, H.-W., Bluck, S., & Westerhof, G. (2017). Longitudinal relations between self-defining memories and self-esteem: Mediating roles of meaning-making and memory

The role of autobiographical memories in self perception of middle-aged adults

- function. *Imagination, Cognition and Personality*, 37, 318 - 341 doi <http://dx.doi.org/10.1023/A:1007688525023>
- Luchetti, M., & Sutin, A. R. (2015). Age differences in autobiographical memory across the adult lifespan: older adults report stronger phenomenology. *Memory*, 25(1), 117-130. doi:10.1080/09658211.2017.1335326
- Luchetti, M., Rossi, N., & Montebanocci, O. (2016). Self-defining memories. *Journal of Clinical Psychology*, 20, 80-85. doi:10.1111/cp.12032
- McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology*, 5(2), 100-122. doi: <http://dx.doi.org/10.1037/1089-2680.5.2.100>
- McAdams, D., Anyidoho, N., Brown, C., Huang, Y., Kaplan, B., & Machado, M. (2004, Aug). Traits and stories: links between dispositional and narrative features of personality. *Journal of Personality*, 72(4), 761-784.
- Moffitt, K. H., & Singer, J. A. (1994). Continuity in the life story: Self-defining memories, affect, and approach/avoidance personal strivings. *Journal of Personality*, 62(1), 21-43. <https://doi.org/10.1111/j.1467-6494.1994.tb00793.x>
- Montebanocci, O., Surcinelli, P., & Rossi, N. C. (2016). Self-Defining and Early Childhood Memories: Subjective Intensity Rating of Memory-Related Emotions. *American Journal of Applied Psychology*, 5(5), 32-37. doi: 10.11648/j.ajap.20160505.12
- Pillemer, D. B. (2001). Momentous events and the life story. *Review of General Psychology*, 5(2), 123-134. doi: <http://dx.doi.org/10.1037/1089-2680.5.2.123>
- Pillemer, D. B., Goldsmith, L. R., Panter, A. T., & White, S. H. (1988). Very long-term memories of the first year in college. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 14(4), 709-715. doi: <http://dx.doi.org/10.1037/0278-7393.14.4.709>
- Rasmussen, A. S., Ramsgaard, S. B., & Berntsen, D. (2015). Frequency and functions of involuntary and voluntary autobiographical memories across the day. *Psychology of Consciousness: Theory, Research, and Practice*, 2(2), 185-205. doi: <http://dx.doi.org/10.1037/cns0000042>
- Rathbone, C., Moulin, C., & Conway, MA. (2008, Dec). Self-centered memories: the reminiscence bump and the self. *Memory and Cognition*, 36(8), 1403-1414.
- Robinson, R. G. & Price, T. R. (1982) Post-stroke depressive disorders; A follow-up study of 103 outpatients. *Stroke*, 13, 635-641.
- Rubin, D. C., Wetzler, S. E., & Nebes, R. D. (1986). Autobiographical memory across the lifespan. In D. C. Rubin (Ed.). *Autobiographical memory*, 202-221.
- Schacter, D. L. (1999). The seven sins of memory: Insights from psychology and cognitive neuroscience. *American Psychologist*, 54(3), 182-203.
- Schacter, D. L., & Addis, D. R. (2007). The cognitive neuroscience of constructive memory: remembering the past and imagining the future. *B: Biological Sciences*, 362(1481), 773-786. doi: <http://doi.org/10.1098/rs>
- Schmitz, T. W., & Johnson, S. C. (2007). Relevance to self: A brief review and framework of neural systems underlying appraisal. *Neuroscience and biobehavioral reviews*, 31(4), 585-596. <https://doi.org/10.1016/j.neubiorev.2006.12.003>
- Singer, J. A. (1990). Affective responses to autobiographical memories and their relationship to long-term goals. *Journal of Personality*, 58(3), 535-563. doi: <http://dx.doi.org/10.1111/j.1467-6494.1990.tb00242.x>
- Singer, J. A., & Blagov, P. (2004). The Integrative Function of Narrative Processing: Autobiographical Memory, Self-Defining Memories, and the Life Story of Identity. In D. R. Beike, J. M. Lampinen, & D. A. Behrend (Eds.), *Studies in self and identity. The self and memory*, 117-138.

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- Singer, J. A., & Moffitt, K. H. (1991). An Experimental Investigation of Specificity and Generality in Memory Narratives. *Imagination, Cognition and Personality*, 11(3), 233-257. doi: <https://doi.org/10.2190/72A3-8UPY-GDB9-GX9K>
- Singer, J. A., & Salovey, P. (1993). *The remembered self: Emotion and memory in personality*. New York, NY, US: Free Press.
- Sönmez, C. C. (2009). Masters thesis in Developmental Psychology. Koç University.
- Sumner, L. A., Wong, L., Schetter, C. D., Myers, H. F., & Rodriguez, M. (2012). Predictors of posttraumatic stress disorder symptoms among low-income Latinas during pregnancy and postpartum. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4(2), 196-203. doi: <http://dx.doi.org/10.1037/a0023538>
- Sutin, A. R., & Gillath, O. (2009). Autobiographical memory phenomenology and content mediate attachment style and psychological distress. *Journal of Counselling Psychology*, 56(3), 351-364. doi: <http://dx.doi.org/10.1037/a0014917>
- Sutin, A., & Robins, R. (2007). Phenomenology of autobiographical memories: The Memory Experiences Questionnaire. *Memory*, 15, 390-411. doi: <http://dx.doi.org/10.1080/09658210701256654>
- Tangney, J. P., & Fischer, K. W. (Eds.). (1995). *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride*. Guilford Press.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92(4), 548-573. doi: <http://dx.doi.org/10.1037/0033-295X.92.4.548>
- Williams, J. M., Barnhofer, T., Crane, C., Herman, D., Raes, F., Watkins, E., & Dalgleish, T. (2007). Autobiographical memory specificity and emotional disorder. *Psychological Bulletin*, 133(1), 122-148. doi:10.1037/0033-2909.133.1.122

Acknowledgements

The author appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author declared no conflict of interest.

How to cite this article: Ghose U. & Mukherjee T. (2020). The role of autobiographical memories in self perception of middle-aged adults. *International Journal of Indian Psychology*, 8(3), 998-1018. DIP:18.01.107/20200803, DOI:10.25215/0803.107