

RESEARCH

Association between Narrative Meaning Making and Psychological State

Anlatısal Anlam Oluşturma ve Psikolojik Durum İlişkisi

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Abstract

The aim of this study was to examine the past events that create a turning point in life and fictional events that can create a turning point in the context of narrative meaning-making style, psychological state and gender. The sample of the study consists of 81 non-clinical volunteers between the ages of 18-35, undergraduate students/graduates. In the study, the participants were asked to write a total of four autobiographical memories, two of which were about the past and two about the future. To measure the psychological state, Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), Adult Psychological Resilience Scale (PRS), Psychological Wellbeing Scale (PWS), Social Comparison Scale (SCS), Ideal and Real Self-Concept Scale (IRSCS) were applied. As a result of the statistical analysis, thematic coherence in positive memories was found to be associated with scores of BAI in women; with PWS, PRS, and SCS in men and factual elaboration was found to be associated with PRS in women. Interpretative elaboration in negative memories predicted the scores of IRSCS, agency PWS and SCS scores in males. Interpretive elaboration in positive fictional narratives in women with BAI and BDI; with BDI in men; seeking support in negative memories was observed to be associated with BAI in women and BDI in men. In conclusion, the relationships between the meaning-making process and the psychological state have a very specific and complex mechanism, and thematic coherence is a strong predictor of psychological well-being and self-concept. In women, factual elaboration was associated with resilience, and in negative memories, self-connections were associated with the level of social comparison. Women preferred to tell more negative memories, while men preferred more positive memories, and motivational themes came to the fore in men's narratives.

Keywords: Meaning making, narrative identity, self, psychological well-being, gender

Öz

Bu çalışmada, yaşamda dönüm noktası yaratan geçmiş olaylar ile dönüm noktası yaratabilecek kurgusal olayların anlatısal anlam oluşturma tarzı, psikolojik durum ve cinsiyet bağlamında incelenmesi amaçlanmıştır. Araştırmanın örneklemini 18-35 yaş arası lisans öğrencisi/ mezunu, klinik olmayan 81 gönüllü oluşturmaktadır. Çalışmada, katılımcılardan ikisi geçmişe, ikisi geleceğe dair toplam dört otobiyografik anı yazmaları istenmiş, psikolojik durumu ölçmek için ise katılımcılara Beck Anksiyete Envanteri (BAE), Beck Depresyon Envanteri (BDE), Yetişkinler İçin Psikolojik Dayanıklılık Ölçeği (PDÖ), Psikolojik İyi Oluş Ölçeği (PIOÖ), Sosyal Karşılaştırma Ölçeği (SKÖ), İdeal ve Gerçek Benlik Kavramı Ölçeği (İGBKÖ) uygulanmıştır. İstatistiksel analizler sonucunda, olumlu anılarda tematik tutarlılığın kadınlarda BAE puanlarıyla; erkeklerde PIOÖ, PDÖ ve SKÖ ile; olumsuz anılarda ise kadınlarda PDÖ ile ilişkili olduğu bulunmuştur. Olumsuz anılarda yorumlayıcı detaylandırma erkeklerde İGBKÖ gerçeğe puanlarını, eylemlilik ise PIOÖ ve SKÖ puanlarını anlamlı olarak yordamıştır. Olumlu kurgusal anlatılarda yorumlayıcı detaylandırmanın kadınlarda BAE ve BDE ile; erkeklerde BDE ile; olumsuz anılarda ise destek aramanın kadınlarda BAE ile, erkeklerde BDE ile ilişkili olduğu bulunmuştur. Sonuç olarak, anlam oluşturma süreci ile psikolojik durum arasındaki ilişkilerin oldukça spesifik ve karmaşık bir mekanizmaya sahip olduğu, tematik tutarlılığın psikolojik esenlik ve kendilik kavramının güçlü bir yordayıcısı olduğu gözlenmiştir. Kadınlarda olumsuz anılarda ise kendilik bağlantılarının sosyal karşılaştırma düzeyiyle ilişkili olduğu saptanmıştır. Kadınlarda daha çok olumsuz, erkekler ise daha çok olumlu anı anlatmayı tercih etmiş, motivasyonel temalar erkeklerin anlatılarında öne çıkmıştır.

Anahtar sözcükler: Anlam oluşturma, anlatısal kimlik, kendilik, psikolojik iyi oluş, cinsiyet

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OUR life stories not only provide information about our identity, but also shape and maintain it (Habermas and Bluck 2000, McLean et al. 2007, McLean et al. 2020). Since the ability to create a life story requires more social and cognitive skills, it emerges in adolescence and plays an important role in the expression of identity in adolescence and beyond (Habermas & Bluck, 2000). Narrative identity is accepted as one of the three levels of personality (McAdams and Pals 2006). In this sense, autobiographical narrative can be defined as a cognitive product that organizes experiences with meaningful connections between past experiences and self, so contributes to identity integrity.

Narrative meaning-making, on the other hand, is a cognitive process that refers to how a person uses and conveys life experiences in the process of understanding herself, the world, and other people. At the junction of the concepts of personality, identity and self, narrative meaning-making as a process with a changing and developing structure in socio-cultural contexts has been one of the prominent topics of cognitive psychology in recent years. According to Park (2010), meaning making from life stories is a positive outcome of attempts to create meaning.

Habermas et al. (2013) suggest using two indicators to detect meaning making. One of them is the interpretation of experienced events and the other is the degree of integrating these events with the life story. While decrease in remembering the episodic features of the events experienced with old age, it is observed that the increase in the search for meaning (interpretation and integration) continues until middle adulthood. In this sense, we can say that meaning making from life experiences is a deep developmental process (Fivush et al. 2017).

Adler et al. (2015) generally gathered the components of narrative meaning-making under four basic categories. These are structural features (coherence, etc.), motives (agency, communion, etc.), emotional valence (positive, negative, etc.), and autobiographical reasoning-like meaning-making (self-event connections, etc.). Fivush et al. (2017) made a similar classification and explained the narrative indicators in a broader framework. The classification headings are as follows: coherence, subjective perspective, integrative meaning, and motivational themes. Since it is considered that they explain more systematically and comprehensively, the classification of Fivush et al. (2017) will be included here.

Coherence is one of the narrative elements that represents the structural content of the narrative and indicates that it has a coherent structure. We can talk about three types of coherence: chronological, contextual, and thematic. Chronological coherence is a concept that refers to the expression of the actions in the narrative in chronological order and the report of the event in an appropriate temporal sequence. According to Habermas and Bluck (2000), temporal ordering is an essential feature in terms of providing the basic form of coherence in life stories. Contextual coherence in the narrative refers to the time and place of an event, while thematic coherence shows the causal connections between the actions in the narrative. Thematic coherence can be mentioned if a solution is offered to the narrative or if it contains links to future events, self-concept, or identity and other autobiographical experiences. Studies on this subject have reported that awareness of thematic interpretation of past events as a critical process in identity development begins in the middle of adolescence and continues until adulthood (Habermas and Bluck 2000).

According to Fivush et al. (2017), at least in adults, the prerequisite for coherence and order in a narrative is subjective perspective (Fivush et al. 2017). Subjective

perspective is the internal language expressions that point to the subjective elements such as emotions, thoughts and beliefs conveyed in the narrative. The integrative meaning, on the other hand, indicates how the subjective perspective of the person about the event he/she has experienced changes over time. Active effort is required to openly explore, reflect on, or process a difficult life experience. In this sense, the connections between experienced event and the self, the interpretative elaboration of the event constitute the integrating elements in the narrative. According to Pasupathi and Wainryb (2010), factual elaboration includes observable information about the event, whereas interpretive elaboration includes all emotional, intellectual and belief information about the event experienced by the person.

Successfully coping with important life experiences requires the integration of the experiences with the autobiographical reasoning into the life story (Habermas and Bluck 2000). Therefore, self-event connections contribute to the maintenance of self-continuity by mediating the establishment of connections between the past and the self (Pasupathi et al. 2007). Change connections refer to change that experienced event creates in self. For example, "After this incident, I became a more cheerful person." While describing an event current features that person emphasizes about himself are stable connections. For example, "This event has shown that I am a cheerful and tolerant person."

The motivational themes in the narrative show inclusive motivational orientations of the individual as like sympathy and mediation, which support personal approaches to life, provide identity continuity through the consistency of their goals and values in different events. Agency, one of the motivational themes, addresses to concepts of self-control, empowerment, success, or status, with goals of individuation and self-expansion. On the other hand, communion is an expression of active effort to achieve meaningful goals, as like cooperation and benevolence, related to the development of social unity as integrating the self into larger social units in communication with other people. According to Abele and Wojciszke (2007), agency basically emphasizes the motivation to pursue the goals of the self, while communion is associated with thinking about others. The theme of support seeking, another motivational indicator in the narrative, refers to the desire to seek help from other people.

The way of constructing narrative meaning plays an important role in individuals' coping with negative experiences (Huang et al. 2021). In the literature, it is accepted that people with a coherent and detailed narrative style pass through a more productive meaning-making process and display less maladaptive behaviors (such as depression, anxiety, trauma) and have more adaptive processes (such as psychological well-being, life purpose) (Fivush and Baker-Ward 2005, McLean and Pasupathi 2010, Greenhoot and McLean 2013, Adler et al. 2015). In narrative meaning-making, the focus is on how events are narrated rather than on what is remembered. In this context, it is argued that expressing emotions and thoughts clearly in the face of events with traumatic and negative consequences in narratives creates an emotional regulation in people and this regulation is effective on psychological well-being (Frattaroli, 2006).

Narratives contribute to the self in many positive and negative ways, and in this sense, life events provide opportunities for individuals to enter the narrative process (Merrill et al. 2016). In particular, the events that create turning points in life and the meanings derived from these events point to change. According to Bruner (1994), turning points in life have self-enhancing functions. In addition, it has been stated that

imagining the future as well as the past makes the person psychologically resilient in the face of crises and changes in life (Sools and Mooren 2012). However, when studies focusing on the relationship between imagination, meaning-making and psychological well-being are considered, it seems that projections for the future are neglected (Sools et al. 2015). For this reason, in the present study, future (fictional) events are also included, and narrative criteria used for past events are used in the coding of fictional events in the meaning-making process.

In the present study, the relationships between the styles of making meaning of young individuals and their psychological states were examined. The narratives were examined in terms of structural, motivational, and integrative meaning indicators of meaning-making, and the specific and individual relationships of each narrative indicator with psychological state (such as psychological distress, psychological well-being, and self-perception) in the meaning-making process were analyzed. The coding scheme used in the coding of narratives was structured based on previous research on this subject. Accordingly, the narratives of the participants included structural themes: thematic coherence, chronological coherence, contextual coherence, and factual elaboration (Pasupathi and Wainryb 2010, Reese et al. 2011); motivational themes: agency, communion, seeking support, (Minister 1966, Abele and Wojciszke 2007); integrative meaning: positive and negative self-event connections, interpretative elaboration (Pasupathi and Wainryb 2010, Habermas and Köber 2015, Graci and Fivush 2017) were analyzed in terms of narrative indicators.

Method

Sample

The sample consists of non-clinical young individuals in young adulthood who receive undergraduate education. A total of 81 volunteers between the ages of 18-35 participated in the study. Participants who reported that they had a neurological or psychological disorder and were using medication were not included in the study. A total of 93 participants completed the study. Since 1 of the participants had a neurological disorder and 2 of them had extreme values, their data were included in the study, and 9 participants were excluded because they did not complete the study. The demographic characteristics of the participants and the scores they got from the clinical scale/inventories are shown in Table 1..

Measures

In the study, the psychological distress of the participants was assessed with their depression and anxiety levels.

Beck Depression Inventory (BDI)

The Beck Depression Inventory (BDI), which was developed by Beck et al. (1961) to measure the emotional, cognitive, and motivational symptoms of depressive symptoms, was used to determine the level of depression. The inventory is a Likert-type measurement tool that consists of twenty-one items and is scored between 0-4. The highest possible score is 63. The validity and reliability study of the inventory in Turkish culture was carried out by Hisli (1988). The Cronbach alpha coefficient was found to be

.78. In the validity and reliability study conducted with university students, the Cronbach alpha was calculated as .80 (Hisli 1989).

Table 1. The frequency of demographic information and comparison of clinical scale/inventories

Variable	n		(%)	
Gender	Female	59	72.8	
	Male	22	27.2	
Marital Status	Single	69	85.2	
	Married	12	14.8	
Employment Status	Student	42	51.9	
	Employed	34	42	
	Unemployed	5	6.2	
	Female	Male	t	p
	Mean \pm SD	Mean \pm SD		
Age	23.56 \pm 4.18	23.46 \pm 3.53	-0.714	0.479
Education Year	13.78 \pm 1.43	14.00 \pm 1.15	0.113	0.911
BAI	14.90 \pm 12.97	11.55 \pm 11.89	1.101	0.277
BDI	12.46 \pm 9.25	11.55 \pm 10.32	0.364	0.718
PWS	42.95 \pm 8.58	43.14 \pm 7.75	-0.094	0.926
SCS	83.12 \pm 13.98	81.41 \pm 14.09	0.487	0.629
PRS	124.95 \pm 19.11	125.32 \pm 18.52	-0.079	0.937
IRSCS _{real}	104.56 \pm 35.31	103.82 \pm 26.88	0.101	0.920
IRSCS _{ideal}	99.36 \pm 19.83	92.60 \pm 21.96	1.265	0.214

BDI: Beck Depression Inventory; BAI: Beck Anxiety Inventory; PWS: Psychological Well-Being Scale; PRS: Psychological Resilience Scale for Adults; IRSCS: Ideal and Real Self-Concept Scale; SCS: Social Comparison Scale

Beck Anxiety Inventory (BAI)

The anxiety level of the participants was measured with the Beck Anxiety Inventory (BAI). A high score in the Likert-type inventory developed by Beck et al. (1988) to evaluate the frequency of an individual's anxiety symptoms. Inventory consists of twenty-one items, scores between 0-3 and, indicates the level of anxiety experienced by the individual. Validity and reliability study in Turkish culture performed by Ulusoy et al. (1998) and the Cronbach alpha internal consistency value of the inventory was determined as .93.

The Psychological Well-Being Scale (PWS) and the Psychological Resilience Scale for Adults (PRS) were administered to the participants to assess their psychological well-being.

Psychological Well-Being Scale (PWS)

PWS was developed by Diener et al. (2010) to measure psychological well-being in individuals and adapted to Turkish culture by Telef (2013). Scores range from 8 to 56 in this Likert-type scale, which is scored between 1 and 7 and consists of 8 items, with a single factor. The Cronbach's alpha internal consistency coefficient of the scale was determined as .80, and the test-retest reliability coefficient was calculated as .86 ($p < .01$).

Psychological Resilience Scale for Adults (PRS)

PRS was developed by Friborg et al. (2003) to evaluate resilience in adults. The scale consists of six sub-dimensions: structural style, future perception, self-perception, family harmony, social competence, and social resources. The highest score that can be

obtained from the scale is 165. The validity and reliability study of the scale was carried out by Basım and Çetin (2011). The Cronbach's alpha value of the scale was calculated as .86 for both student and employee samples. Test-retest reliability, on the other hand, ranged between .68 and .81.

Self-perceptions of the participants were evaluated with the Ideal and Real Self-Concept Scale (IRSCS) and Social Comparison Scale (SCS).

Ideal and Real Self-Concept Scale (IRSCS)

IRSCS was developed by Waugh (2001) to measure ideal and real self-concept. There are 90 items in the scale, which has three sub-dimensions: academic, social, and self-presentation. The highest score to be obtained from the Likert-type scale, which is scored between 0-4, is 270. The validity and reliability study of the scale was done by Kapıkıran (2004). It was determined that the Cronbach's alpha values of all scales and subscales ranged between .79 and .95, and the test-retest reliability ranged between .71 and .92.

Social Comparison Scale (SCS)

Social Comparison Scale (SCS) aims to evaluate how a person perceives himself in various dimensions in the context of social comparison. Scale was developed by Gilbert et al. (1991). Validity and reliability studies in Turkish culture was carried out by Şahin et al. (1993). In the scale, the individual is expected to evaluate himself between 1 and 6 by comparing himself with other people in terms of 18 adjectives presented. Scores range from 18 to 108. High scores from the scale indicate positive self-schema, and low scores indicate negative self-schema. The Cronbach alpha internal consistency reliability coefficient of the scale was calculated as .81 (Savaşır and Şahin 1997).

Procedure

The study was approved by the Süleyman Demirel University Faculty of Medicine Clinical Research Ethics Committee (decision dated 25.09.2020 and numbered 20/279). Before starting the study, all necessary information was given, and written consent form was obtained from the participants. In the study, the participants were asked to write a total of four autobiographical memories, two of which are from the past and two from the future, which have created a turning point in their lives and are likely to create a turning point in the future. Before the memories were written, the participants were explained with examples of what an autobiographical memory meant, and the participants were expected to tell specific events that took place at a certain time, not general events while writing their memories. Participants wrote their narratives on the Autobiographical Memory Evaluation Form. In order not to spoil the spontaneity of the narratives, no guidance was made in terms of the emotional value of the memories. To measure the psychological state, the participants were given the tests and inventories described above, and a week was given to write their memories and fill in the scales. In addition, all the instructions of the research were given in writing, and contact information was added so that they could easily reach the researcher in any case. After the data collection phase was over, autobiographical memories were classified according to their positive and negative emotional values and examined.

Coding

The coding criteria Graci et al. (2018) and Reese et al. (2011) used in their studies was adopted in this study. The summary of the coding scheme is presented in Table 2.

Table 2. Narrative coding scheme

	Narrative Indicators
	Structural Themes
Thematic Coherence	Bringing a resolution to the story in the narrative involves links to other autobiographical experiences, including self-concept or identity.
Chronological Coherence	The degree to which the conveyed event is in a certain chronological order in time.
Contextual Coherence	The extent to which time and space are specifically mentioned in the narrative.
Factual Elaboration	Observable, factual details such as what, where, when, why, how, who in the narrative, such as the degree of objective detail.
	Motivational Themes
Agency	Expressions in the narrative that point to the goals of the self, such as individuation, empowerment, success, status, self-control.
Communion	Expressions conveyed in the narrative that indicate concern for other people, such as social cohesion, cooperation, helpfulness, and relationship development.
Support Seeking	Expression of sensitivity in the face of danger or receiving emotional help from people in a meaningful way when help is not available from other people in the narrative.
	Integrative Meaning Making
Self-event Connection	All connections made between the events and the self.
Positive Self- event Connection	Positive connections established between experienced events and the self.
Negative Self-event Connection	Negative connections established between experience events and the self.
Interpretative Elaboration	All the feelings, thoughts, beliefs, and subjective inferences expressed in the narrative about the event.

Statistical analysis

Before statistical analysis, the data were analyzed according to the assumptions of normality, linearity, and homogeneity. As a result of the examination carried out to determine the extreme values in the data, the data of two participants was excluded from the research. In the study, narrative indicators (thematic coherence, chronological coherence, contextual coherence, factual elaboration, agency, communion, support seeking, positive self-event connection, negative self-event connection, and interpretive elaboration) were the independent variables of the research, psychological state factors (anxiety, depression, psychological well-being, social comparison, psychological resilience, ideal and real self-perception) constitute the dependent variables. Stepwise Regression and Pearson Correlation Analysis were applied to the scores obtained to determine to what extent narrative indicators predict psychological state in the meaning-making process.

Results

Past events

According to the results of the regression analysis, thematic coherence scores in positive memories explain 12% ($R^2 = .120$) of the variance in BAI scores in female participants [$F(1.51) = 6.788$; $p < 0.05$]. In males, 43% ($R^2 = .428$) of the variance in PWS scores [$F(1.21) = 14,946$; $p < 0.01$]; 35% ($R^2 = .348$) of the variance in the SCS scores [$F(1.21) =$

10.669; $p < 0.004$]; 36% ($R^2 = .359$) of the variance in PRS scores [$F(1,21) = 11,218$; $p < 0.01$] is seen to predict significantly. In addition, the interaction scores of thematic and contextual coherence in males accounted for 54% ($R^2 = .537$) of the variance in PWS scores [$F(2,21) = 11,015$; $p < 0.01$]. Chronological coherence scores accounted for 23% ($R^2 = .234$) of the variance in BDI scores in males [$F(1,21) = 6.101$; $p < 0.05$]. Factual elaboration scores predict 13% ($R^2 = .133$) of the variance in PRS scores in women [$F(1,51) = 7.676$; $p < 0.01$]. The findings of positive memories experienced are shown in Table 3.

Table 3. Results of stepwise regression analysis applied for narrative indicators of positive memories and psychological state scores

Psychological Factors	Gender	Narrative Indicators	B	ShB	β	t	p	R	R^2
Anxiety	F	Thematic Coherence	-4.655	1.787	-.346	-2.61	.012 [*]	.346	.120
Depression	M	Chronological Coherence	-7.188	2.910	-.483	-2.47	.023 [*]	.483	.234
Psychological Well-Being	M	Thematic Coherence	5.611	1.451	.654	3.87	.001 ^{**}	.645	.428
		Thematic Coherence	5.956	1.349	.694	4.41	.000 ^{***}	.733	.537
		Contextual Coherence	-3.101	1.465	-.333	-2.12	.048 [*]	.733	.537
Psychological Resilience	F	Factual Elaboration	7.167	2.587	.365	2.77	.008 ^{**}	.365	.133
	M	Thematic Coherence	9.722	2.903	.599	3.35	.003 ^{**}	.599	.359
Social Comparison	M	Thematic Coherence	7.611	2.330	.590	3.27	.004 ^{**}	.590	.348

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 4. Results of stepwise regression analysis applied for narrative indicators of experienced negative memories and psychological status scores

Psychological Factors	Gender	Narrative Indicators	B	ShB	β	t	p	R	R^2
Psychological Well-being	F	Thematic Coherence	3.273	1.353	.288	2.42	.018 [*]	.288	.083
	M	Agency	3.500	1.525	.466	2.30	.033 [*]	.466	.217
Social Comparison	M	Agency	6.650	3.140	.437	2.12	.048 [*]	.437	.191
	F	Self-event Connection	7.082	2.883	.291	2.46	.017 [*]	.291	.085
Real Self	F	Factual Elaboration	-10.436	4.594	-.271	-2.27	.026 [*]	.271	.074
	F	Factual Elaboration	-19.015	5.031	-.494	-3.78	.000 ^{***}	.453	.205
		Contextual Coherence	18.496	5.676	.426	3.26	.002 ^{**}	.453	.205
	M	Interpretative Elaboration	-14.798	6.352	-.471	-2.33	.031 [*]	.471	.222
Ideal Self	F	Thematic Coherence	7.273	3.042	.284	2.39	.020 [*]	.284	.081

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

In negative memories, thematic coherence scores accounted for 8% ($R^2 = .083$) of the variance in PWS scores [$F(1,66) = 5.857$; $p < 0.05$] and 8% ($R^2 = .081$) of the variance in IRSCSideal scores in women [$F(1,66) = 5.717$; $p < 0.05$]. The agency scores predicted 19% ($R^2 = .191$) of the SCS scores [$F(1,20) = 4.485$; $p < 0.05$] and 22% ($R^2 = .217$) of the PWS scores [$F(1,20) = 5,268$; $p < 0.05$] in men. Self-event connection scores accounted for approximately 9% ($R^2 = .085$) of the variance in SCS scores [$F(1,66) = 6.035$; $p < 0.05$] in females. The factual elaboration scores predicted 7% ($R^2 = .074$) of the variance in IRSCSreal in women [$F(1,66) = 5.160$; $p < 0.05$]; the interaction scores of factual elaboration and contextual coherence accounted for approximately 21% ($R^2 = .205$) [$F(2,66) = 8.272$; $p < 0.01$]. Interpretive elaboration scores, on the other hand, explained

22% ($R^2 = .222$) of the variance in the IRSCSreal in males [$F(1,20) = 5.428$; $p < 0.05$]. Findings of negative memories are given in Table 4.

Table 5. Correlation coefficients between psychological scale scores and narrative indicators of experienced events in female participants

Narrative Indicators	Positive Narrative							Negative Narrative						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Thematic Coherence	-.35*	-.27	.13	.07	.35*	.11	.07	-.21	-.23	.29*	.27*	.18	-.16	.28*
Chronological Coherence	-.24	-.20	-.03	-.01	.26	-.07	-.03	-.17	-.01	.19	.06	.18	-.26*	.08
Contextual Coherence	-.25	-.11	-.06	.18	.11	.26	-.04	.11	.02	.08	.03	-.01	.17	-.01
Factual Elaboration	-.22	-.27	.19	.25	.37**	.08	.13	-.24	-.11	.16	.06	.18	-.27*	-.03
Agency	-.01	.10	.07	.20	.07	-.08	-.02	.11	.06	-.01	.15	-.04	-.10	.15
Communion	-.09	-.22	-.03	-.07	-.04	-.07	-.07	-.18	-.16	.08	.12	.08	-.09	.15
Support Seeking	-.20	-.24	.05	-.10	.13	-.13	-.08	.02	-.16	.03	.08	.05	.01	.13
Self-event Connection	-.10	.01	.08	-.03	.14	-.20	-.06	-.16	-.18	.23	.29*	.12	-.18	.25*
Positive Self-event Connection	-.10	.01	.08	-.03	.14	-.20	-.06	-.19	-.24	.23	.18	.02	-.14	.20
Negative Self-event Connection	.00	.00	.00	.00	.00	.00	.00	.02	.07	.02	.20	.16	-.09	.10
Interpretative Elaboration	-.14	-.22	.05	-.07	.10	-.13	-.03	-.13	-.15	.17	.19	.16	-.27*	.18

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$; 1=BAI 2=BDI 3=PWS 4=SCS 5=PRS 6=IRSCSreal 7=IRSCSideal

Table 6. Correlation coefficients between psychological scale scores and narrative indicators of experienced events in male participants

Narrative Indicators	Positive Narrative							Negative Narrative						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Thematic Coherence	-.37	-.38	.65**	.59**	.60**	.42	.28	-.18	-.32	.46*	.31	.18	-.01	.14
Chronological Coherence	-.24	-.48*	.50*	.57**	.39	.28	.37	-.26	-.21	.30	.10	.10	-.16	-.04
Contextual Coherence	.21	.07	-.25	-.20	-.17	.32	-.05	.39	.19	-.28	-.26	-.23	-.38	-.35
Factual Elaboration	-.23	-.32	.29	.37	.24	.28	.25	-.15	-.08	-.14	-.08	-.06	-.28	.11
Agency	.22	-.22	.29	.21	.29	-.25	.17	-.02	-.22	.47*	.44*	.28	.19	.26
Communion	-.08	-.11	-.09	-.01	-.17	.16	-.13	-.12	-.11	-.18	-.29	-.28	-.44*	-.12
Support Seeking	-.37	.32	.03	-.10	-.14	.27	-.35	-.07	-.24	.17	.04	.01	-.16	.05
Self-event Connection	-.09	-.32	.11	.29	.01	-.34	.02	.03	-.14	.35	.21	.04	-.09	.22
Positive Self-event Connection	-.09	-.32	.11	.29	.01	-.34	.02	.17	-.08	.36	.29	.20	.11	.34
Negative Self-event Connection	.00	.00	.00	.00	.00	.00	.00	-.18	-.09	.03	-.09	-.20	-.27	-.13
Interpretative Elaboration	-.37	-.34	.46*	.42*	.32	.20	.27	-.21	-.20	.05	-.16	-.23	-.47*	-.12

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$; 1=BAI 2=BDI 3=PWS 4=SCS 5=PRS 6=IRSCSreal 7=IRSCSideal

The Pearson correlation coefficient results between the scores obtained from psychological scales and the narrative indicators are shown in Table 5 and Table 6.

Fictional events

Stepwise regression analysis was applied to the scores obtained from the psychological scales and the scores of the narrative indicators obtained by coding the events the participants constructed about the future. The results are shown in Table 7 and Table 8.

According to the results of the Regression Analysis, the interpretative elaboration scores in fictional positive memories in female participants accounted for approximately 9% ($R^2 = .094$) of the variance in BAI scores [$F(1,62) = 6.363$; $p < 0.05$]. Interpretative elaboration scores were found to significantly predict approximately 9% ($R^2 = .088$) of the variance in BDI scores in women [$F(1,62) = 5.916$; $p < 0.05$]. The interaction scores of the interpretative elaboration and communion variables explained approximately 18%

($R^2 = .176$) of the variance in BDI scores [$F(2,62) = 6.396$; $p < 0.01$]. In males, interpretative elaboration scores were found to significantly predict approximately 15% ($R^2 = .153$) of the variance in BDI scores [$F(1,26) = 4.504$; $p < 0.05$].

Table 7. Results of stepwise regression analysis applied for narrative factors and psychological state scores of positive fictional memories

Psychological Factors	Gender	Narrative Indicators	B	ShB	β	t	p	R	R^2
Anxiety	F	Interpretative Elaboration	-6.877	2.726	-.307	-2.52	.014*	.307	.094
Depression	F	Interpretative Elaboration	-4.509	1.854	-.297	-2.43	.018*	.297	.088
		Interpretative Elaboration	-5.957	1.868	-.393	-3.19	.002**	.419	.176
		Communion	3.169	1.257	.311	2.52	.014*	.419	.176
	M	Interpretative Elaboration	-7.750	3.652	-.391	2.12	.044*	.391	.153

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 8. Results of stepwise regression analysis for narrative factors and psychological status scores of negative fictional memories

Psychological Factors	Gender	Narrative Indicators	B	ShB	β	t	p	R	R^2
Anxiety	F	Thematic Coherence	-5.290	2.247	-.341	-2.36	.023 [†]	.341	.117
	F	Support Seeking	5.612	2.742	.301	2.05	.047 [†]	.301	.091
Depression	M	Support Seeking	-12.412	4.566	-.652	-2.72	.022 [†]	.652	.425
Ideal Self	F	Contextual Coherence	13.382	5.929	.329	2.26	.029 [†]	.329	.108
Social Comparison	F	Factual Elaboration	-13.123	6.460	-.299	-2.03	.049 [†]	.299	.089

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 9. Correlation coefficients between psychological scale scores and narrative indicators of fictional events in female participants

Narrative Indicators	Positive Narrative							Negative Narrative						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Thematic Coherence														
Chronological Coherence	-.26*	-.24	.17	.19	.07	.03	.13	-.34*	-.26	-.10	-.20	-.16	-.03	-.30*
Contextual Coherence	-.19	-.13	.06	.08	.04	.14	.14	-.19	-.19	.11	-.02	.17	-.04	.20
Factual Elaboration	.02	-.02	.00	.14	.08	.02	-.01	.04	.08	-.23	-.03	-.15	-.17	.33*
Agency	-.24	-.21	.15	.17	.13	.08	.04	.01	-.18	-.16	-.30*	.02	.16	-.11
Communion	-.11	-.08	.10	-.07	-.01	-.05	-.06	-.04	.03	.19	.06	.23	.05	.22
Support Seeking	-.04	.19	-.14	-.14	-.19	.03	-.19	-.07	-.06	-.16	-.14	-.17	.08	-.12
Self-event Connection	-.08	.00	.01	-.18	-.10	-.19	-.02	.30*	.14	-.15	-.10	-.17	.16	-.27
Positive Self-event Connection	.03	.07	.14	.20	.05	.18	.16	-.10	-.10	-.18	-.18	-.18	.07	.08
Negative Self-event Connection	.03	.07	.14	.20	.05	.18	.16	.01	-.01	-.26	-.21	-.16	.20	.01
Interpretative Elaboration	.00	.00	.00	.00	.00	.00	.00	-.16	-.15	.07	-.01	-.07	-.15	.11
	-.31*	-.30*	.18	.18	.13	.08	.15	-.26	-.18	.22	.09	.14	-.07	-.09

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$; 1=BAI 2=BDI 3=PWS 4=SCS 5=PRS 6=IRSCSreal 7=IRSCSideal

In negative memories, thematic coherence scores in women accounted for approximately 12% ($R^2 = .117$) [$F(1,43) = 5.544$; $p < 0.05$]; support seeking scores explained approximately 9% of the variance of in BAI scores ($R^2 = .091$) [$F(1,43) = 4.188$; $p < 0.05$]. Support seeking scores accounted for approximately 43% ($R^2 = .425$) of the variance in BDI scores in males [$F(1,11) = 7.388$; $p < 0.05$]. Factual elaboration scores predicted approximately 9% ($R^2 = .089$) of the variance in SCS scores in women [$F(1,43) = 4.127$; $p < 0.05$]. Contextual coherence scores explained approximately 11% ($R^2 = .108$) of the variance in IRSCSideal scores [$F(1,43) = 5.095$; $p < 0.05$] in females. The correlation results between the narrative indicators scores derived from fictionalized

events and the scores obtained from psychological scales are shown in Table 9 and Table 10.

Table 10. Correlation coefficients between psychological scale scores and narrative indicators of fictional events in male participants

Narrative Indicators	Positive Narrative							Negative Narrative						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Thematic Coherence	-.10	-.16	.16	.09	.20	.37	.01	.50	.26	.26	.14	.34	.19	.08
Chronological Coherence	-.02	-.08	.13	-.21	.02	-.15	-.06	.37	.26	.16	.09	.25	.18	-.06
Contextual Coherence	.00	-.04	.02	-.17	-.16	-.22	-.21	.03	-.14	.15	.11	.22	-.12	.12
Factual Elaboration	-.11	-.18	.03	-.27	-.10	-.16	-.09	.56	.24	.43	.38	.51	.35	.15
Agency	.12	.02	.01	-.05	.05	.28	-.01	-.25	-.50	-.05	.05	.00	-.27	.26
Communion	-.26	-.25	.34	.18	.21	.18	.22	-.22	-.23	.06	-.13	-.05	-.28	.02
Support Seeking	-.08	-.13	.16	.15	.04	.01	.28	-.54	-.65*	.07	-.01	.01	-.45	.02
Self-event Connection	.01	.03	.03	-.19	-.17	-.09	-.16	-.05	-.22	-.28	.03	-.20	.09	.16
Positive Self-event Connection	.01	.03	.03	-.19	-.17	-.09	-.16	-.05	-.22	-.28	.03	-.20	.09	.16
Negative Self-event Connection	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Interpretative Elaboration	-.24	-.39*	.29	.13	.26	.09	.17	-.16	.02	.01	-.17	.01	-.17	-.42

*p<0.05 ** p<0.01 ***p<0.001; 1=BAI 2=BDI 3=PWS 4=SCS 5=PRS 6=IRSCSreal 7=IRSCSideal

Discussion

The use of different coding schemes and focusing on different psychological variables in studies make it difficult to explore the relationships between the narrative meaning-making process and psychological factors and to understand the underlying psychological mechanism (Graci et al. 2018). For this reason, a picture emerges in which it is not possible to compare the results obtained and to detect which narrative indicators are more important in psychological well-being. To go one step further in this regard, there are some studies examining the narrative meaning-making process in terms of the underlying factorial structure (Graci et al. 2018, McLean et al. 2020). In them, the relationship between meaning-making and psychological well-being is generally gathered under four factorial titles: affective themes, structural elements, motivational themes, and integrative meaning. On the other hand, it is necessary to develop explanatory models by examining and clarifying the specific relationships between narrative indicators and psychological state at many points. In this context, the present study was carried out to realize the individual weight of narrative indicators in general psychological well-being as a small step to be taken in this regard.

We can list the hypotheses of the current research as follows: based on the common acceptance (Grysmen and Hudson 2013) in the literature that women narrate their personal memories in a more vivid, detailed, and richer emotional language compared to men, it was expected that significant gender differences would emerge in terms of meaning-making style. It was predicted that the structural elements of the narrative would play an important role in predicting the psychological state, and that motivational themes would come to the fore in women's narratives by conveying more negative memory content than men. Also been predicted that fictional memories will reveal gender differences as much as real memories. As predicted, it was found that thematic coherence from structural elements was a good predictor of psychological well-being and self-concept, women preferred to tell more negative memories about both the past and the future, while men preferred to tell more positive memories, and self-event

connections were effective predictors of women's psychological state. Contrary to expectations, motivational themes were more prominent in men's narratives than in women's narratives, themes such as power and individualization in past negative memories predicted well-being and social comparison levels in men. In addition, it was concluded that the meaning-making process was based on experienced events rather than future expectations. It was found that positive evaluations of individuals about the future explained their low anxiety levels, support seeking in negative narratives about the future predicted high anxiety level in women, whereas it predicted low depressive characteristics in men. Other detailed results obtained in the research are described below.

In our study, when the positive memories of the female were examined, it was observed that the thematic coherence, which is one of the structural indicators, explained the low anxiety level, and the thematic coherence scores obtained from the negative memories significantly explained the psychological well-being and ideal self-concept scores. In other words, high thematic coherence in the meaning-making process can predict psychological well-being, low anxiety levels, and high ideal self-concepts in women. For male participants, it is seen that thematic coherence has a significant relationship with psychological well-being. It was found that thematic coherence in positive memories significantly explained the psychological well-being, resilience, and social comparison scores of men. That is, thematic coherence in terms of both positive and negative narratives was a strong predictor of psychological well-being in both genders. Pals (2006) reports that narrative coherence and positive solutions derived from negative experiences are two basic elements of subjective well-being. In this sense, we can say that thematic coherence is a roof indicator that provides information about the psychological state of the individual. The present study also found that chronological coherence, another structural element, was also associated with lower depression levels in male participants. Based on these findings, it would not be wrong to state that narrative coherence has a critical function in the meaning-making process.

Although the narrative has strong structural features associated with psychological well-being (Baerger and McAdams 1999, Frattaroli 2006, Waters and Fivush 2015), there are researchers who argue that high structural features are associated with high stress levels (Graci et al. 2018). Accordingly, the strong structural qualities of the narrative in the meaning-making process are indicators of greater cognitive preoccupation with the stressful experience. There are some results reporting that low level of narrative coherence is associated with various psychological disorders (Brewin 2014, Rubin et al. 2016, Vanderveren et al. 2019b). For example, Vanderveren et al. (2020) showed that a high level of coherence creates more rumination tendencies and causes symptoms of depression and post-traumatic disorder. On the other hand, in our study, in which the participants narrated their turning points in their lives, it was observed that structural features were strongly associated with psychological well-being for both positive and negative memories. In this context, if we assume that it is relatively easier to create making of stressful and traumatic life experiences compared to non-stressful ones, we can predict that positive life experiences mostly need strong structural elements in the narrative.

In our study, it was found that one of the narrative indicators that predicted psychological resilience and real self-perception in women was factual elaboration. Factual detail is defined as observable or perceptible information in a particular

experience. The interpretative detail, on the other hand, reflects the desires, feelings, beliefs, and thoughts of individuals who have experienced an event (Pasupathi and Wainryb 2010). Women prefer to use more factual and interpretive details in their narratives than men (Gryzman and Hudson 2011, Gryzman and Denney 2016, Gryzman et al. 2016). In our current study, factual details were associated with psychological resilience in positive memories of women in the same direction, and in negative memories with real self-scores in the opposite direction. It seems possible that factual elaboration may be associated with resilience in positive experiences and low sense of self in negative experiences. This surprising finding needs to be explained with further results.

According to Graci et al. (2018), motivational indicators in the narrative are windows that provide information about personality. As stated, agency, one of the motivational indicators in the narrative, includes qualities such as self-affirmation, expansion, individualization, competence, ambition, dominance, power, and achievement. Communion, on the other hand, focuses on concepts such as caring for the care and welfare of others, cooperation, interdependence, love, intimacy and belonging. It is known that well-being has strong relationships with motivational and affective themes (McLean et al. 2020). In studies on this subject, a high level of well-being is observed in people who focus on the development of others with dominant communion characteristics, while those who focus on personal development tend to evaluate the changes in their lives positively (Bauer and Mcadams 2004). When there is an increase in the motivation for agency in people's narratives with contributions of therapy sessions, it was observed that clinical symptoms such as anxiety and low self-perception decrease (Adler 2012).

In the literature, agency as a gender stereotype is often associated with masculinity, and communion with femininity (Bakan 1966, Leaper and Ayres 2007, Sczesny and Kaufmann 2018). According to Moskowitz et al. (1994), gender differences are observed mostly in terms of communal characteristics; regardless of their social status, women act with more communal motivation especially towards their fellows. Regarding this issue, Suitner and Maass (2008) reported that when the emotional value of the stimuli is controlled, more communal traits occur in women and more agentic traits in men. We found that agentic features in the past negative memories of male participants were associated with psychological well-being and social comparison levels. Thus, agency in negative experiences of men is thought to function as a defense mechanism in the context of the relationships between psychological well-being and positive self-concept. These findings are compatible with the general gender stereotype in the literature and support the findings of McLean et al. (2016). In conclusion, we can say that masculinity supports agency and thus serves psychological well-being as a defense mechanism.

There are conflicting results in terms of the use of self-event connection and gender differences (Pasupathi and Mansour 2006, Gryzman et al. 2016). In our study, it was found that the self-event connections used by female participants in negative memories were related to their social comparison scores. In this sense, the prediction of social comparison levels of the connections established between negative experiences and self in women can be considered as a new finding for the literature. From another perspective, it also means that the self-event connections especially in negative narratives, make more projections about their selves. In the process of creating meaning from people's life experiences, self-connections have important functions in both positive identity

development and psychological well-being. In this regard, Merrill et al. (2016) found that individuals who make positive self-connections in the face of events, regardless of their emotional value, experience less psychological stress and show more post-traumatic recovery. They also stated that although women generally experienced high levels of psychological distress and identity crisis, they achieved high levels of psychological development and identity discovery. In support of these views, although not at a significant level in our study, we observed that women mostly use positive self-event connections, and the connections significantly predict their preoccupation with themselves.

We found that interpretative elaboration was inversely related to the real self-perception in negative memories of men. This finding suggests that subjective evaluations and comments are associated with negative self-investments of individuals. Related to this issue, we can say that when difficult experiences cannot be interpreted efficiently, it will have damaging effects on the narrative identity and development (Pals 2006). Sales et al. (2013) suggest that having a high level of cognitive language regarding negative events is associated with high levels of depressive symptoms. In this sense, the tendency of individuals with low self-worth to make negative evaluations about their lives seems significant. This point can be explored in detail by considering possible intervening variables in terms of narrative identity.

We found that interpretive elaboration in positive constructs of individuals about their futures had an inverse relationship with anxiety and depression in both genders. As a matter of fact, it can be expected that subjective evaluations about positive future events are associated with low anxiety and depressive symptoms. In negative fictional events, thematic coherence in women was found to be associated with lower anxiety levels. Considering that strong thematic coherence is an indicator of low anxiety level in narratives about the past, this finding is not surprising. On the other hand, factual elaboration in negative fictional narratives of women was found to be inversely related to the level of social comparison. Past negative memories were also found to be inversely related to true self-scores. For this reason, it is thought that factual knowledge in the narrative can be an important indicator of concerns about self-perception, which should be emphasized.

As an interesting finding, support seeking in negative fictional narratives was found to be correlated in the same direction with anxiety level in women and inversely with depression level in men. In other words, high level of support seeking in negative fictions indicates high level of anxiety in women, on the contrary, it is an indicator of low depressive characteristics in men. Considering the common view in the literature that women expect social support more easily than men (Barbee et al. 1993, Reevy and Maslach 2001), we can conclude that the current findings are compatible with this point of view.

The results show that the narrative identity and the meaning-making process, which mutually affect each other, are determined by many intermediate variables such as gender, developmental period, socio-cultural context, and therefore the relations between the meaning-making process and the psychological state have a very specific and complex mechanism. For this reason, we can say that future studies related to the meaning-making process and psychological well-being need different models that consider possible intervening variables and illuminate the underlying structural mechanism. On this subject, it is frequently stated that a wider variety of narrative

indicators, psychological well-being assessment criteria, and therefore explanatory scientific models are needed to understand the contributions of narrative meaning-making to identity construction and psychological well-being (Fivush et al. 2017, Graci et al. 2018). As a small step in this regard, the current study has the potential to generate new ideas for future studies.

The present study has some limitations. First, low numbers of male participants (n=22), due to the low motivation of male participants to participate in research. To eliminate this limitation, the split method was used for the gender variable in the statistical analyzes of the study. As a result, remarkable research results were obtained from male participants. On the other hand, it is argued that gender differences occur more commonly in oral expression than in written narratives (Grysmen and Denney 2016). For this reason, the fact that the narratives were written in the present study can also be considered as a limitation. Obtaining data from a single developmental cohort is another limitation of the study. Future studies should be conducted in which individuals in different developmental stages are compared in terms of the meaning-making process.

Conclusion

It was observed that the meaning-making process benefits from past experiences rather than future expectations. Thematic coherence was found to be a good predictor of psychological well-being and self-perception, women preferred to narrate more negative memories and men more positive memories, and self-event connections gave more information about the psychological state of women. Motivational themes came to the fore in men's narratives, and it was observed that such themes were associated with men's well-being and social comparison levels. It was found that positive fictions about the future explain low levels of anxiety and support seeking in negative narratives about the future predicts high anxiety levels in women and low depressive levels in men. In summary, current research results suggest that individuals' personal narratives about the past and future can provide critical information about their psychological state at the clinical level.

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