

# Timing of Parenthood and Generativity Development: An Examination of Age and Gender Effects in Turkish Sample

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**Abstract** Many studies have been published so far indicating that generativity, which is the psychological need to care for and give back to the next generation, is commonly considered in relation to parenthood. The present study investigates links between the age of first parenthood and the societal generativity development and life satisfaction among the young (aged from 29 to 35) and middle aged (aged from 40 to 55) adults in Turkish male and female sample ( $n = 156$ ). Data were collected through self-report questionnaires including the satisfaction with life scale, Loyola Generativity Scale (LGS), generative behavior checklist (GBC) and demographic information. Results revealed that in general, women had higher score on generativity behavior (which was measured by GBC) than men. Additionally, the interaction effect of gender and timing of parenthood revealed a significant main effect on both generativity concern (LGS) and generative acts (GBC). Specifically, compared to late fathers (>26 years), late mothers had higher score on both generativity concern (LGS) and generative behavior (GBC), and compared to late fathers, early mothers (<25 years) also had a higher score on generative behavior (GBC). While among women age of parenthood did not differ across groups with regard to generativity, among men, age of parenthood was related to generative behavior. The present study revealed that females were already significantly more generative than males of their age-group and the timing of having one's first child seems to have some critical effect on the development of father's generativity. Explanations for the

findings are framed in terms of gender roles and cultural factors.

**Keywords** Timing of parenthood · Generativity · Life satisfaction · Psychological well-being · Gender

## Introduction

Through the course of life, individual development and family relationships are reciprocal. As suggested by the life course theory, individuals' lives are embedded in and shaped by *the historical times and places* they experience (Elder 1994, 1998). Therefore, societal expectations affect the meaning of the “right time” or “on-timeness” of entering adult roles in different life domains. In addition, life-span developmental psychology suggests that adulthood is a time of continuing change. Therefore, looking from the other side and viewing the developmental paths of children and parents within a joint context would be more helpful for understanding “family” as a whole, because children not only contribute to their own development, but also exert an influence on the development of adults. (Dillon 2002; Pal-kovitz 1996; Ambert 1992). Several theoretical and conceptual orientations (Erikson 1963; Gilligan 1982; Levinson 1986; Vaillant and Vaillant 1990) have been applied and utilized to understand the experience of adulthood.

In recent years, the effects of parenting on adult development have been studied, especially in relation to the concept of generativity. Generativity was first introduced by Erikson (1963) in his life-span model of human development. Erikson viewed generativity, which primarily involves concern and care for others, as the critical developmental task of midlife. Although Erikson noted that parenthood is neither necessary nor sufficient for achieving

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generativity, there is empirical support for Erikson's concept that having a child and caring for that child facilitates generativity (McAdams and de St Aubin 1992; Snarey et al. 1987; Vaillant and Milofsky 1980). For example, McAdams and de St Aubin (1992) studied adults who were between 19 and 68 years of age. They found that young, middle-aged and older men expressed different levels of generativity and fathers scored higher than childless adults on the Loyola Generativity Scale (LGS, a measure that captures adults' concerns with contributing to society and passing on knowledge to others in general).

The timing of parenthood may also affect parents' feelings about their role performances. Parents may have more time and energy to function as both successful providers and active parents by delaying parenthood until their initial career goals have been achieved (Cooney et al. 1993; Suzanne 1993; McMahan 1992). However, Finley (1998) found a gender difference which revealed that maternal age at childbirth and perceived affective quality of mothering were not significantly related. Yet late paternal age (i.e., fathers whose ages were between 30 and 39 at childbirth) at childbirth and perceived affective quality of fathering were significantly related. Thus, it is suggested that men may feel better about involved parenting in their 30s due to reduced emotional and financial strain associated with their relatively advanced career position. Similarly, it is emphasized that compared to on-time fathers, late fathers are more likely to be classified as highly involved with positive paternal affect (Cooney et al. 1993), and compared to younger parents, delayed parents had somewhat more positive childrearing attitudes (Suzanne 1993; McMahan 1992). Additionally, research on paternal affect reveals that highly involved fathers often feel rather dysphoric, in conflict with their need to devote time to career goals (Baruch and Barnett 1986). Thus, it appears that by delaying parenthood, men may be able to invest more readily in the paternal role. Therefore, timing of parenthood may affect the parental activities and role expectations which in turn may evoke differences in generativity achievement, especially for men.

Similarly, generativity literature also suggests a gender difference in the generativity development. As suggested by Snarey et al. (1987) study, for men, there seems to be a connection between having children and developing generativity. Furthermore, in their studies, young females were already significantly more generative than males of their age-group, and it was proposed that cultural forces, which emphasize a nurturing role of women, may explain the generativity difference. Similarly, McAdams and de St Aubin (1992) found that the men who had children had higher levels of generativity than the men without children. Snarey (1993) indicated that gender differences may occur in the expression and scheduling of generativity, especially

if men are shielded from the responsibilities of parenting. However, similar differences were not reported for women, suggesting the possibility that having children is more closely linked with generativity for men than for women. Thus, greater individual levels of variation in these activities for men allow different parental experiences and makes involved parenting a stronger predictor of generativity, because involved parenting activities are more unique and salient to men than to women.

Relationships are embedded in social context, social relations differ from one culture to another, and family relations and parenting styles are also shaped by culture (Ambert 1994). In his theory of the life cycle, Erik Erikson (1963, pp. 249–260) concentrated not on the physical survival of children but on their psychosocial development, and he emphasized how important culture was at every step of the way. Basically, parenting and family relationships are different in collectivistic and individualistic societies. While Western cultures tend to promote individuals viewing themselves as independent, autonomous systems, non-Western cultures view the self as interdependent. (Markus and Kitayama 1991). Markus and Kitayama (1991) point out that although people in Western cultures do care and show compassion for others, prosocial behavior is seen as voluntary, but not taken for granted. On the contrary, people in non-Western cultures care for others and see oneself as part of a greater whole, and prosocial behavior is seen as both voluntary and taken for granted. Additionally, Markus and Kitayama (1991) indicate that some subgroups in the Western culture (e.g., women, ethnic minorities) have a more interdependent type of self. As emphasized before in some of the empirical works in parenting and generativity, McAdams and de St Aubin (1992) and Snarey et al. (1987) indicated that parenting is especially important for males' generativity development. Since Turkey is a more collectivistic culture (Göregenli 1997), structural forces in society can make enormous differences in behavior according to the current study variables.

There are also conceptual differences in terms of timing of parenthood in different cultures. In Western countries, early timing of motherhood (i.e., teenage pregnancy) usually occurs outside of the context of marriage, without the approval of the couple's families of origin. In these countries, many studies established the risk processes of early timing of motherhood (e.g., Maughan and Lindelow 1997; Serbin et al. 1991) as well as early timing of fatherhood (e.g., Stouthamer-Loeber and Wei 1998; Thornberry et al. 1997). On the other hand, in most of the non-Western countries, early marital age can be acceptable by families. Early childbearing is a way of confirming fertility of the newly married couple. Newborns are mostly welcomed by members of the whole family. In short, cultural forces decisively shape how people orient themselves

to the next generation and the culture creates an atmosphere in which children survive.

Some studies also examined the impact of parenthood on the psychological well-being of parents (Umberson and Gove 1989). Psychological well-being and specifically life satisfaction at mid-to-later adulthood may be influenced by diverse life experiences. As An and Cooney (2006) emphasized, parents in mid-to-late adulthood who evaluated their parenting as successful reported better psychological well-being. Additionally, both psychological well-being and physical health have often been shown to be positively associated with generativity (Erikson 1963; Keyes and Ryff 1998; McAdams et al. 1993; Snarey 1993). Keyes and Ryff (1998) also investigated generativity and its consequences for the quality of life. In their study done with a sample composed of 3,032 men and women aged from 25 to 74, almost all measures of generativity predicted psychological well-being for the study respondents. Additionally, higher levels of psychological well-being supported more generative concern for others' welfare and well-being.

In sum, studies revealed that parenting is an important contributing factor for generative development, and timing of parenthood can affect the level of parental involvement. In fact, theoretical perspectives say much about culture and generativity (e.g., McAdams et al. 1998), but so far, there have not been many empirical studies which have examined the meaning of generativity across different cultures. Therefore, this study assesses the influence of parental age at first birth on adults' generativity development and general life satisfaction in a sample of Turkish males and females.

## Method

### Participants

The data were collected from 156 middle-aged adults (89 women and 67 men) who had child(ren) between ages 2 and 12 years living in metropolitan areas. Inclusion criteria for subjects were being biological parents from middle SES, living together and not divorced, and having a job. Most of the participants were intermediate level employees (76.4 % of the women and 70.2 % of the men). But 11.2 % of the women and 4.5 % of the men were higher-level employees. Additionally, 2.2 % of the women and 6 % of the men were lower level employees.

### Procedure

The studies were collected through self-report questionnaires. Before the study, informed consent was obtained

from all participants and only volunteer participants were given the questionnaires. There was no identifying information on the questionnaires, in order to ensure anonymity and confidentiality. The completed questionnaires were collected later.

### Measures

Multiple Questionnaires were administered to mothers and fathers. First, demographic information was collected from all mothers and fathers. General life satisfaction was assessed with the satisfaction with life scale (SWLS; Diener et al. 1985) Generativity concern was assessed with the LGS and generative behavior was assessed with the Generative Behavior Checklist (GBC) (McAdams and de St Aubin 1992).

### *Demographic Data*

All participants reported their ages, marital status, their own education levels, educational level of their wife/husband and educational level of their own parents, length of their marriages, number of children at home, gender of the child(ren) they had, their ages at the first onset of parenthood, how many years after marriage they had their first child, how long they had been living in big city, whether they had lived in another place, whether any relatives had been living with them, and their perception of their SES in Turkey.

### *General Life Satisfaction*

The SWLS (Diener et al. 1985) is a five-item scale that assesses the cognitive component of SWB (subjective well-being). Participants indicated how satisfied they were with their lives and how close their life was to their ideal. The SWLS typically uses a 7-point response format. We changed the response format to a 5-point scale ("totally satisfied," "satisfied," "no opinion," "not satisfied," "not satisfied at all") because a 5-point response format was used for most of the questionnaires in the survey. Cronbach's alpha value for the female sample was .87, and alpha value for the male sample was .85.

### *Loyola Generativity Scale (LGS)*

Generativity was assessed with the LGS, a 20-item instrument developed by McAdams and de St Aubin (1992). LGS was related to self-reported generative acts and expressions of generativity in autobiographical accounts. In addition, although no LGS items deal explicitly with raising children, parents scored significantly higher on the LGS than non-parents did (McAdams and de

**Table 1** Mean, standard deviation, alpha values and gender differences in observed variables

Variables	Male ( <i>n</i> = 67)			Female ( <i>n</i> = 89)			Independent sample <i>t</i> values
	Mean	SD	$\alpha$	Mean	SD	$\alpha$	
Demographic variables							
Age	42.49 (29–55)	6.90	–	41.55 (30–55)	7.03	–	0.83
Education	4.58 (2–6)	0.84	–	4.56 (2–6)	0.67	–	0.15
Duration of marriage	16.73 (5–31)	7.32	–	18.56 (6–38)	7.41	–	–1.50
Age of first parenthood	26.68 (17–38)	4.17	–	23.67 (14–33)	3.12	–	5.08*
Well-being							
Life satisfaction	15.87	4.20	.85	17.06	3.89	.87	–1.80***
Societal generativity							
LGS	36.12	8.10	.73	37.65	9.17	.74	–1.10
GBC	47.40	19.60	.91	53.33	15.19	.87	–2.05**

The unit for all the demographic variables is years. *LGS* Loyola Generativity Scale, *GBC* generativity behavior checklist

\*  $p < .01$ ; \*\*  $p < .05$ ;

\*\*\*  $p = .07$

St Aubin 1992). In terms of discriminant validity, McAdams and de St Aubin (1992) reported that the LGS and a measure of social desirability were weakly correlated ( $r = .17$ ). LGS items were answered on a 4-point scale (0 = the statement never applies to me, 3 = the statement applies to me very often), with 6 of the 20 items reverse worded. Examples of the items from the LGS were “I try to pass along the knowledge I have gained through my experiences” and “I feel that I have done nothing that will survive after I die” (the second item reverse coded). Cronbach’s alpha value was .74 and .73 for the female sample and male sample, respectively.

#### Generative Behavior Checklist (GBC)

The GBC consisted of 50 items phrased as behavioral acts. Forty acts were chosen to suggest generative behaviors such as “taught somebody a skill,” “read a story to a child” and “donated blood,” and 10 were chosen as acts that appeared to be irrelevant to generativity such as “went to see a movie or play” and “participated in an athletic sport.” Although in the original scale, the subject responded to each act by specifying how often during the previous 2 months he or she had performed the given act, in this study, participants responded to each act by specifying how often they had performed it during the previous 6 months. This is because it was thought that some of the behaviors executed within the last 2 months could hardly be detected in our culture. Therefore, subjects were marked 0 if the act had not been performed during the previous 6 months, 1 if the act had been performed once during that period and 2 if the act had been performed more than once during the previous 6 months. In the original scale, while composite scores of the generative acts were obtained with summing across the 40 items, composite scores of the acts irrelevant to generativity were obtained with summing across the 10 items, and total acts were obtained with summing across all

50 items. Cronbach’s alpha value was .87 and .91 for the female sample and male sample, respectively.

#### Data Analyses

First, descriptive analyses were conducted to gather information about the means, standard deviations and reliability coefficients of the variables. For descriptive purposes, the major study variables among females and males were compared by using the *t* test for independent samples (see Table 1). For the analysis of the timing of parenthood, age of first-time parenthood categories was coded as 1 = relatively early parenthood (parenthood before age 25) and 2 = relatively late parenthood (parenthood after age 26). Because timing of parenthood and first child’s age were significantly correlated, first child’s age was controlled in the analysis. Therefore, in order to compare the groups (gender and timing of parenthood) in generativity development and well-being, multivariate analyses of covariance (MANCOVA) were used with post hoc analysis in Minitab program. The frequency of missing data was relatively small per measure. Therefore, to maintain sample size and reduce sample bias, person-mean substitution for missing data on the scales was utilized. All analyses were conducted by using the Statistical Package for Social Sciences.

## Results

### Descriptive Results

The sample consisted of males (43 %) and females (57 %). The ages of participants ranged from 29 to 55 years (median = 42). The duration of marriage ranged from 5 to 38 years ( $M = 17.79$ ). Seven percent of the sample graduated from elementary school, 29.9 % had some college,

58.4 % had a bachelor’s degree, and 3.9 % had a master’s or doctoral degree. See Table 1 for the preliminary examinations for male and female samples [i.e., means, standard deviation, alpha ( $\alpha$ ) values]. The data were screened for missing values and violations of the assumptions of multivariate analysis.

Correlations Among Observed Variables

Since timing of parenthood can affect the ways mothers and fathers respond to their children, parental issues, and their generativity level, correlations between study variables were computed according to the age of first parenthood. Table 2 presents the Pearson correlations among the study variables for the age of first-time parenthood (i.e., <25 years and >26 years). Expected significant relations can be seen only for the parents who became first-time parents after the age of 26 (see Table 2).

MANCOVA

MANCOVA was conducted to test the differences in timing of parenthood and gender on major study variables. In this analysis, gender and first parenthood age (i.e., <25 years or >26 years) were considered as the independent variable, age of the first child as the covariate, and life satisfaction, generativity concern (LGS) and generative behavior (GBC) as the dependent variables. Table 3 summarizes the group mean performance and statistical comparisons for each task.

Results indicated that the multivariate main effect for gender was significant (Wilks- $\lambda = 0.98, F(3,145) = 0.82, p < .05$ ), whereas the main effect of timing of parenthood was not significant (Wilks- $\lambda = 0.98, F(3,145) = 0.56, p > .05$ ). However, there was a significant interaction effect of gender and timing of parenthood on the study variables (Wilks- $\lambda = 0.92, F(3,145) = 3.97, p < .01$ ). No significant effect was detected for the covariate of first child’s age (Wilks- $\lambda = 0.98, F(3,145) = 0.82, p > .05$ ).

**Table 2** Correlations among the variables of the study according to timing of parenthood

	1	2	3	4
1. Gender	1.00	.11	-.03	-.07
2. Life satisfaction	.16	1.00	.06	.07
3. LGS	.31*	.38**	1.00	.30**
4. GBC	.45**	.26	.37**	1.00

GBC generativity behavior checklist, LGS Loyola Generativity Scale. Correlations above the diagonal are for <25 years for the first parenthood age, below the diagonal are for >26 years for the first parenthood age

\*  $p < .05$ ; \*\*  $p < .01$

Univariate analyses of gender indicated that GBC [ $F(1,151) = 5.680, p < .05, \text{partial } \eta^2 = .037$ ] significantly differed between women and men, which reveals that women’s generative behavior (GBC) level ( $M = 54.95, SD = 2.11$ ) was higher than men’s. Additionally, the interaction effect of gender and timing of parenthood on the study variables revealed that both LGS [ $F(1,151) = 4.780, p < .05, \text{partial } \eta^2 = .031$ ] and GBC [ $F(1,151) = 10.330, p < .01, \text{partial } \eta^2 = .066$ ] differed significantly across the groups. Therefore, follow-up post hoc analyses were done with Minitab program for both LGS and GBC. Results revealed significant differences on LGS between late motherhood and fatherhood ( $t = 2.82, p < .05$ ) with late mothers scoring higher ( $M = 42.19, SD = 1.88$ ) than late fathers, and marginally significant differences between early and late motherhood ( $t = 2.43, p = .07$ ), with late mothers scoring higher than early mothers. In accordance with the GBC, three significant interaction effects were observed. These were between early and late fatherhood ( $t = -2.94, p < .05$ ), with early fathers scoring higher ( $M = 52.78, SD = 3.12$ ) than late fathers; between early motherhood and late fatherhood ( $t = 2.56, p \leq .05$ ), with early mothers scoring higher ( $M = 51.13, SD = 2.16$ ) than late fathers; and between late motherhood and late fatherhood ( $t = 3.71, p < .01$ ), with late mothers scoring higher ( $M = 58.78, SD = 3.69$ ) than late fathers.

Discussion

The purpose of this study was to investigate the influence of timing of parenthood and gender on societal generativity (i.e., generativity concern-LGS and generative behavior-GBC) and life satisfaction. This study’s main finding is that generativity development differed in terms of the timing of parenthood and gender. In general, women were more generative than men, congruent with the previous studies (McKeering and Pakenham 2000; McAdams and de St Aubin 1992; Snarey et al. 1987). Additionally, the interaction effect of gender and timing of parenthood revealed significant effects on both generativity concern (LGS) and generative acts (GBC). Specifically, compared to late fathers, late mothers had higher scores on both generativity concern (LGS) and generative behavior (GBC), and compared to late fathers, early mothers had also higher scores on generative behavior (GBC). It appears that in general, women’s generativity level is higher than men’s. As proposed in previous studies, (McAdams and de St Aubin 1992; Snarey et al. 1987) cultural forces, which emphasize a nurturing role of women, may explain the generativity difference. In fact, men and women have different developmental trajectories with respect to their self-perceptions of their roles as parents and their involvement, which in

**Table 3** Means and standard deviations for variables

Variable	Timing of parenthood						Group differences <sup>a</sup>	
	Early (<25 years)		Late (>26 years)		Total			
	Women (n = 64)	Men (n = 29)	Women (n = 21)	Men (n = 34)	Women (n = 85)	Men (n = 63)		
Loyola Generativity Scale, generative behavior checklist	Mean	16.85	15.71	17.65	16.19	17.25	15.95	ns
	SD	0.51	0.74	0.88	0.71	0.50	0.51	
LGS	Mean	36.23	37.35	42.19	35.58	39.21	36.46	LM > LF*
	SD	1.10	1.58	1.88	1.52	1.07	1.09	LM > EM***
GBC	Mean	51.13	52.78	58.78	42.27	54.95	47.52	W > M** EF > LF*
	SD	2.16	3.12	3.69	2.99	2.11	2.14	EM > LF* LM > LF**

LGS Loyola Generativity Scale,  
GBC generative behavior  
checklist

<sup>a</sup> This column indicates which  
group (EM early motherhood,  
LM late motherhood, EF early  
fatherhood, LF late fatherhood,  
W women, M men) has  
significantly different means at  
\*  $p < .05$ ; \*\*  $p < .01$ ,  
\*\*\*  $p = .07$ . ns indicates no  
significant group differences

turn help to understand the role of parenting on generativity. As Snarey (1993) indicated, gender differences may occur in the expression and scheduling of generativity, especially if men are shielded from the responsibilities of parenting. Specifically, mothers are responsible for a substantial amount of childcare, and fathers are mainly responsible for earning bread and have little to do with child caring (Evans 1997).

While the age of first-time parenthood among women did not differ across groups, timing of first parenthood among men was related to generative behavior. According to these results, early fathers had higher scores on generative behavior (GBC) than late fathers. Thus, in the current study, especially for men but not for women, there seems to be a connection between having children early and developing generative acts. It seems that scheduling of parenthood is especially important for fathers' generativity development. As indicated before, women are already expected to have a nurturing role, but men occupy these roles after becoming a father. Therefore, early timing of fatherhood may cause higher father involvement, which in turn makes a difference in generative behavior. This finding can also be explained by the extensive literature on the relationship between parenting and generativity (e.g., Erikson 1963; Snarey 1993) which has revealed that higher involvement in parenting led to a higher level of generativity in midlife adults. However, there are also studies which emphasize that late fathers report significantly more involvement with their children than both on-time and early fathers (Cooney et al. 1993). Since in the current study, paternal involvement was not measured, further studies are also needed to examine the role of timing of parenthood in paternal involvement and generativity development.

Importantly, generative action as a behavioral component of generativity is under the strong influence of cultural demands (i.e., sociocultural forces). For example,

Penezic et al. (2008) evaluated predictors of generative action among adults in two transitional countries (i.e., Croatia and Slovenia). The authors found that while the importance of parenthood was significant in the prediction of generative action in Slovenian adults, in the Croatian sample, the important predictor was free time. Thus, generativity is closely related to a society's overall conception of time and values and different societies can expect different timetables for generative roles (McAdams et al. 1998). Furthermore, timing of parenthood is also determined by societal expectations. Becoming a teen parent is generally considered as unusual and "off time" in middle class American society. On the other hand, in most of the non-Western countries, early marital age and early childbearing can be acceptable by the families. Thus, internalized cultural demands and norms may cause complex patterns of behavior, thereby generative action as well.

It appears that in general, parental activities and role expectations may evoke differences in generativity achievement for men and women. Since women's roles in general involve more caring and nurturing of others, they may develop higher levels of generativity than men. However, greater variation in these activities for men allows different parental experiences and makes involved parenting a stronger predictor of generativity, because involved parenting activities are more unique and salient to men than to women. Previous findings report a connection between having children and developing generativity, and this correlation was reported to be even stronger for fathers (e.g., Snarey 1993; Snarey et al. 1987). The present study offers a further view that first parenthood age leads into a different developmental path in men, which in turn may effect men's generative behavior. However, in order to make more clear assumptions about the effect of timing of parenthood on generativity, further studies are needed.

Additionally, in the present study, although there were no main effect of generativity and gender differences on

life satisfaction, correlational analysis revealed that in the late parenthood sample, while life satisfaction was related to generative concern, it was not related to generative behavior. This tendency was also congruent with the previous studies (McAdams et al. 1993) which suggest the reason for this discrepancy (i.e., between generativity concern and generative behavior) is that becoming involved with generative acts is often less pleasant than expressing a concern for others. However, as indicated, there were no statistically significant relationships between life satisfaction and the major variables in this study.

In fact, weight of parental roles differs from one culture to another with respect to generativity, and this issue should also be considered in generativity literature. Importantly, this study was conducted in a non-Western society. Thus, it can be possible to get some sense of cultural opinion in terms of generativity development. However, another discussion leads to an interesting question about the cross-cultural or within cultural generalizability of the present findings. As mentioned, cultures may differ in terms of the norms for generativity development. McAdams et al. (1998) articulated that “Culture strongly influences both the form and the timing of generative expression” (p. 15). Thus, generativity is not fixed, because it is partly based on age-relevant cultural demands. Given the meaning and interpretation of generativity, each culture or different ethnic groups in each culture can expect different timetables for generativity. However, there was little diversity in ethnicity or family structure within this sample, making it problematic to generalize these findings to other samples. Future research should examine how the broader cultural and ethnic community context may shape the possible pathways of generativity development studied here. It is also notable that, in the current study, direction for the measurement of generative acts (as measured by the GBC; McAdams and de St Aubin 1992) slightly differ from the originals because of foregoing discussion about cultural variations. While in the original scale, the subject responded to each act by specifying how often during the previous 2 months he or she had performed the given act, in the current study participants responded to each act by specifying how often it had been performed during the previous 6 months, because it was thought that some of the behaviors executed within the last 2 months could hardly be detected by the participants in our culture. Although recall bias can occur in both situations, motivation of respondents plays a central role that contribute to bias due to differential recall between cases in retrospective studies. Thus, while interpreting the present results in terms of generative behavior, it needs to be careful about comparing with other studies, although reliability score of the GBC was very similar to previous studies. Indeed, social and cultural environments provide relevant normative expectations (McAdams and de St Aubin 1992), and future research on

generativity should be grounded in the social and cultural text in which the study takes place. It is also notable that measurement type of the SWLS typically uses a 7-point response format, but in this study, 5-point response format was used. However, psychometricians implicated that the five- and seven-point scales produced the same mean score as each other, once they were rescaled. In addition, the typical Likert scale offers 5- or 7-choice points which, of itself, is hardly likely to exploit the discriminative capacity (Dawes 2008; Erkuş 2014).

In sum, possibly limiting the generalizability of these findings, it can be concluded that, within a sample of parents in a non-Western culture, timing of parenthood and gender together is related to societal generativity.

### Limitations, Implications and Suggestions

Of course, there are important limitations that must be taken into account when considering the findings. Since the sample of this study represented only a limited part of the population, the findings may not be generalizable to the whole population. It is also important to note that this study included only intact (married) parents. This raises the question of whether the pattern of findings that emerged can be generalized to parents living in other family structures, such as divorced or single parents. Furthermore, only middle SES sample was used in this study. It is possible that parents in the lower or higher socioeconomic levels may also have different types of relationships between the study variables. In addition, the data discussed here were based on the responses from parents majority of whom were in their thirties and forties. The present results may not adequately represent the experiences of parents from previous or future cohorts. Another limitation was that the research was cross-sectional. While cross-sectional data can verify whether a relationship exists between two constructs, it cannot establish the causal priority that exists between them. Moreover, recall bias should be taken under consideration while evaluating the results. Because, it is also possible that, the difference across groups caused by differences in the accuracy of the recollections retrieved (i.e., recalled) by study participants regarding events or experiences from the past.

Future research efforts should consider the potential moderating effects of parent commitments to other valued extrafamilial activities, such as volunteer work or community affairs. Parents' psychological investment in these kinds of activities may serve as important predictors in adult development. Importantly, generative expressions are likely to vary across roles (MacDermid et al. 1996). The types of roles (i.e., parental role, marital role, work role, social role, civic role) are more significant in the development of generativity. However, while examining

parenting and generativity, other major role involvements, especially work roles and perceived employment satisfaction, may give different meanings. Because Turkish women have transitioned from traditional to modern gender role identities, they are now more likely to participate in the labor force, compared to women in the past. Employed women holding a highly ranked position in their workplace perceive the work role as an important aspect of their identities and as an important source of feelings of power and self-respect (Aycan and Eskin 2005). Thus, consideration of generativity separately in the involvement in the roles of parent, marriage and work may explain much more information about adult development.

**Conflict of interest** The author declares that no actual or potential conflict of interest in relation to this article exists.

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