Summary
Age Differences in Perceived Responsiveness in Close Relationships and Its Links to Psychological Well-Being

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Studies have clearly demonstrated the importance of close relationships for individuals’ health and well-being (e.g., Braithwaite, Delevi, & Fincham, 2010; Kiecolt-Glaser, Gouin, & Hantsoo, 2010; Reis, 2012). Although the significance of close relationships continues for a lifetime, some changes have been observed in the relationship dynamics by time (Arnett, 2000). Perceived partner responsiveness (PPR), defined as individuals’ perception about one’s partner understands, values, and cares for one’s self, needs and goals (Reis, Clark, & Holmes, 2004), has been proposed as one of the key contributors to relationship development and well-being (Reis, 2007; Reis & Clark, 2004). Although perceived responsiveness is an essential concept for close relationships; to date, however, there is no examination on how an individual’s perception of responsiveness from a romantic partner, close family members, and close friends differs across the adulthood. Also, the link between perceived responsiveness and psychological well-being has not been investigated yet in Turkey. In this direction, the primary aim of the current study was to investigate the close relationships (i.e., romantic partners, close family members, and close friends) dynamics in the context of perceived responsiveness for the first time in Turkish culture. For this purpose, both age-related differences in perceived responsiveness and the association between perceived responsiveness and psychological well-being were examined in a lifespan adult sample drawn from Turkey. It was expected that perceived friend and family responsiveness would increase with age.

On the other hand, since the period of emerging to middle adulthood includes processes like the transition to being a spouse or parent, and adaptation to these new roles, perceived partner responsiveness would decrease within this period. However, it was expected that the association between age and perceived partner responsiveness would be curvilinear.

Furthermore, parallel with the previous studies (Reis, 2012; Selcuk, Gunaydin, Ong, & Almeida, 2016), it was expected that a positive association between perceived responsiveness and psychological well-being would be observed. Also, it was expected that age would have a moderating effect on the association between perceived responsiveness and psychological well-being. In addition to these, individuals’ gender, relationship status, perceived socioeconomic status, having a child, social contact frequency with family members, partner, and friends, and individual characteristics as neuroticism and extraversion were controlled in the current study.

Method
Participants
This study includes data from two separate adult samples. The data were collected from different cities in Turkey. Information for each sample is given below:

First sample. The sample consisted of 1172 individuals (715 female), ranging in age from 20–82 years ($M = 32.90, SD = 14.54$).

Second sample. The second sample consisted of 842 individuals (62.2% female) ranging in age from 20–87 years. Mean age of participants was 35.46 years ($SD = 15.54$).

Procedure
In the first sample, 91.4% of participants answered questionnaires in an online format. Remaining 101 participants filled out the questionnaire in paper-pen format. The association between perceived responsiveness and psychological well-being was examined in this sample. In the second sample, while 55.9% of participants filled out a questionnaire in an online format, remaining ones filled out it in paper-pen format. This sample was combined with the first sample, and the relation between perceived responsiveness and age was examined in that combined sample.
Materials

Participants completed the Turkish version of Reis’s (2003) Perceived Partner Responsiveness Scale, which consists of 18 items. The scale was adapted into Turkish as part of the current study. Participants also completed Turkish version (Akin, Demirci, Yildiz, Gediksz, & Eroglu, 2012) of Ryff’s (1989) Psychological Well-Being Questionnaire which consists of 42 items, Turkish version (Sümer & Sümer, 2005) of 44-items Big Five Personality Questionnaire (Benet-Martinez & John, 1998) and a demographic form.

Results

Exploratory Factor Analysis

In order to examine the factor structure of Perceived Responsiveness Scale in Turkish sample, exploratory factor analysis was conducted separately for perceived partner responsiveness, perceived family responsiveness, and perceived friend responsiveness by using data of the first sample. The Kaiser-Meyer-Olkin measure of sampling adequacy was .96, .98, .98 respectively, above the recommended value of .6, and Bartlett’s test of sphericity was significant for each ($\chi^2 = 10811.785$, $df = 153$, $p < .001$). For principal components analysis, the direct oblimin method was used. Results of exploratory factor analysis showed a one-factor structure. Factor had eigenvalues of just over 1. The factor explained 63.57% of the variance for perceived partner responsiveness, 67.17% of the variance for perceived family responsiveness, and 64.49% of the variance for perceived friend responsiveness.

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was used to investigate one factor structure of perceived responsiveness scale separately for partner, family and friend by using Mplus 6.12 (Muthén & Muthén, 2011). In these analyses, data from the second sample was used. As suggested by Kernis and Goldman (2006), item parcels were created by randomly assigning items to three item parcels, because compared to individual items, item parcels generally demonstrate higher reliability and usually have better distributional properties. The root mean square error of approximation (RMSEA), the 90% confidence interval of RMSEA, the standardized root mean square residual (SRMR), the comparative fit index (CFI), Tucker and Lewis index (TLI), and the Bayesian information criterion (BIC) were used as evaluation criteria. The modification indices (MI) suggested to add the error correlations between parcel 2 and 3 and between parcel 5 and 1. The goodness of fit index was indicated that Model would be improved by modification ($\chi^2 (7, N = 744) = 19.84, p = .006$, $\chi^2/df = 2.83$, RMSEA = .05, 90% CI (.025-.076), CFI = .99, TLI = .99, SRMR = .01, BIC = 23,334.43 for perceived family responsiveness; $\chi^2 (7, N = 761) = 26.9, p < .001$, $\chi^2/df = 3.84$, RMSEA = .06, 90% CI (.038-.086), CFI = .99, TLI = .99, SRMR = .01, BIC = 22,440.19 for perceived friend responsiveness; $\chi^2 (7, N = 478) = 22.19, p = .002$, $\chi^2/df = 3.17$, RMSEA = .07, 90% CI (.037-.100), CFI = .99, TLI = .98, SRMR = .01, BIC = 14.916.18 for perceived partner responsiveness).

Association between Perceived Responsiveness and Age

To test which of curvilinear model demonstrates best fit the data, linear, quadratic (age2), and cubic (age3) effects of age were created and included in the analyses. In Model I, age variables were significantly related to both perceived family responsiveness and perceived partner responsiveness, respectively, $F (1, 1757) = 5.77, p = .016, R^2 = .003$; $F (3, 927) = 10.15, p < .001, R^2 = .03$. There was a linear association between age and perceived family responsiveness ($B = .01, 95\% CI = [0.001, 0.013], SE = .00, p = .16$). Also, there was a quadratic association between age and perceived partner responsiveness ($B = .43, 95\% CI = [0.046, 0.811], SE = .19, p = .028$). In Model II, relationship status, gender, perceived SES, having children and frequency of contact with family members/partner variables were added in the analysis as covariates. The associations between perceived responsiveness and predictor variables were statistically significant, $F (6, 1160) = 15.15, p < .001, R^2 = .27$ for perceived family responsiveness; $F (7, 898) = 19.01, p < .001, R^2 = .13$ for perceived partner responsiveness.

In the second model, linear association between perceived family responsiveness went on ($B = .02, 95\% CI = [0.010, 0.037], SE = .01, p < .001$). There was still significant association between quadratic effect of age and perceived partner responsiveness ($B = .62, 95\% CI = [0.228, 1.015], SE = .20, p = .002$); however, also there was a significant association between cubic effect of age and perceived partner responsiveness ($B = -.53, 95\% CI = [-0.947, -.103], SE = .22, p = .015$).

Association between Perceived Responsiveness and Psychological Well-being

In order to investigate the association between perceived partner responsiveness and psychological well-being regression analysis were conducted. Perceived partner, family, and friend responsiveness separately associated with psychological well-being in a positive a significant way ($B = .123, SE = .019, \beta = .264, t = 6.46, 95\% CI = [0.085, 0.160], p < .0001$ for partner; $B = .186, SE = .016, \beta = .354, t = 11.76, 95\% CI = [0.155, 0.217], p < .0001$ for family; $B = .133, SE = .013, \beta = .314, t = 10.34, 95\% CI = [0.107, 0.158], p < .0001$ for
friend). In the second model, covariates added into the model; demographic variables (gender, age, neuroticism and extraversion) in first step, in second step, and tested perceived responsiveness variables added regression equation. Results showed that when all variables in the model, only perceived partner responsiveness \((B = .090, SE = .019, \beta = .187, t = 4.81, 95\% CI = [0.053, 0.127], p < .0001)\), but not family \((B = .001, SE = .016, \beta = .001, t = .03, 95\% CI = [-0.031, 0.032], p = .974)\) or friend \((B = .039, SE = .022, \beta = .076, t = 1.78, 95\% CI = [-0.004, 0.082], p = .075)\) responsiveness significantly associated with psychological well-being.

The Moderating Effect of Age on the Association between Perceived Responsiveness and Psychological Well-being

Participants’ age was found as a significant moderator in the association between perceived responsiveness and psychological well-being, such that the positive association between perceived partner responsiveness and psychological well-being was more powerful in young adulthood \((B = .19, SE = .03, t = 5.79, 95\% CI = [0.12, 0.25], p < .001)\) than late adulthood \((B = .09, SE = .03, t = 3.20, 95\% CI = [0.04, 0.15], p < .01)\).

Discussion

Our results suggest that the findings of the statistical factor analyses for the adaptation of the Perceived Partner Responsiveness Scale (Reis, 2003) supported that the scale has a one-factor structure and it is valid in the context of Turkey as well.

Besides, it has been investigated whether the perceived responsiveness from individuals’ close relationships differs according to age. The findings of the study indicated that the perceived family and partner responsiveness had an age-dependent nature, while the perceived responsiveness from friends did not show a significant change with age. According to these results, perceived family responsiveness increases with age. On the other hand, perceived partner responsiveness was found to have a curvilinear relationship with age. According to these findings, the perceived partner responsiveness decreased from young adulthood towards the middle ages and then increased again in late adulthood. It is thought that the decrease in perceived partner responsiveness may be related to the characteristics of middle age. Having multiple roles in their social lives, middle-aged individuals are accompanied by a multitude of responsibilities (Lachman, 2004). Social roles change with age (Helson & Soto, 2005). In this period of life, the number of social roles that individuals undertake reaches its highest level, and over time individuals’ social roles start to decrease (Helson & Soto, 2005). The perceived responsiveness of individuals from their partners is likely to be related to the increase in social roles and social responsibilities in the middle-ages.

Based on our results, perceived partner, family, and friend responsiveness revealed a positive association with psychological well-being regardless of each other, and psychological well-being increases as the perceived responsiveness increases. With the replication of the previous studies in this association by a sample drawn from Turkey, the theoretical assumption of perceived responsiveness and psychological well-being relationship supported that the direction of this relationship would be universal.

Another finding of our study suggested the moderator role of age on the relationship between perceived responsiveness and psychological well-being. Although the perceived responsiveness is significantly and positively related to psychological well-being in all stages of adulthood, this relationship was found to be stronger for young adulthood. According to these findings, it can be said that the perceived partner, friend, and family responsiveness might be more important for individuals’ psychological well-being in young adulthood, and in the later stages of adulthood, individuals become less dependent on their close relations in terms of psychological well-being.

In summary, our findings contributed to the literature by revealing the lifespan importance of perceived responsiveness from close relationships to the lives of individuals with a sample from Turkey. A limitation of our work is that it is a cross-sectional study. Undoubtedly, the effects of social and cultural structures on individuals are historically changing. It is also possible to observe these changes in the interaction dynamics in close relationships. For this reason, our suggestion for future studies is conducting longitudinal research on the individuals’ perceived responsiveness, which would give us more information in this regard.