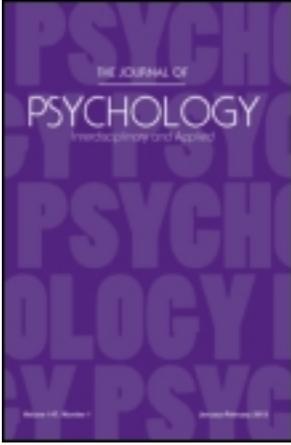


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Relationship of the Gap Between Experience and Language With Mental Health in Adolescence: The Importance of Emotion Regulation

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ABSTRACT. Although past research has provided important information about the relationship between language use and mental health in the period of adolescence, the role of intervening variables in this association has been seriously neglected. The aim of the present study was to illuminate the association between language use (operationalized by “the gap between experience and language—GAP”) and mental health (e.g., adjustment and depression, with the mediator role of emotion regulation). Three-hundred-and-seventy-four adolescents (220 female, 154 male; 16.08 mean age) participated in the study. The results provided support for the mediator role of emotion regulation in the relationship between GAP and mental health. Moreover, it was shown that the relationship between emotion regulation and depression was mediated by adjustment.

Keywords: language, emotion regulation, depression, adjustment, adolescence, writing paradigm

LANGUAGE IS ONE OF THE MOST IMPORTANT HUMAN CAPABILITIES, and declared to be the main tool for consciousness, self-awareness, and self-knowledge (Bucci, 1984; Musacchio, 2002; Wittgenstein, 1997). Consequently, recent approaches to psychology, such as constructivism or social-constructivism, argue that every conceptualization of mental health should take linguistic ability into account (Neimeyer, 1993; Neimeyer & Mahoney, 2002). Past research on language has revealed, among other things, its close connection with mental illness

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(Pennebaker, 1993; Pennebaker & Keough, 1999) starting from childhood (Lemche, Klann-Delius, Koch, & Joraschky, 2004; Lemche, Kreppner, Joraschky, & Klann-Delius, 2007). The means or processes through which language contributes mental illness, however, have yet to be explored in detail. The aim of the present study, which focuses on a group of adolescents, is to contribute to this issue by providing empirical support for the hypothesis that the relationship between language and mental health is mediated by emotion regulation. This study is focused on the most important mental health indicators of adolescence, namely, adjustment and depression, as criteria. Consequently, the mediatory role of emotion regulation in the relationship of language with adjustment and depression has been examined using structural equation modeling (SEM).

Language and Mental Health

Language, a major concern in the field of mental health since Freud (Kristeva, 1989), has continued to attract the attention of researchers. Two basic paradigms in this research arena are Pennebaker's (Pennebaker, 1993; Pennebaker & Chung, 2007) writing paradigm (WP) and Bucci's (1984) multiple code theory (MCT). According to WP, mental and physical health improves when traumatic or problematic experiences are transformed into language. Research results (Pennebaker & Chung, 2007 for a review) provided strong support for this theory, indicating that the expression of psychological experiences decreases depression and increases psychosocial adjustment. Although MCT is based on a psychodynamic approach, it states, in a similar vein, that language, as a symbolic system, is one of the most effective ways of representing personal emotional schemas, namely, the sub-symbolic system, created in the early stages of development. Health gains are closely connected to higher levels of referential activity: that is, transforming emotional experiences into concrete language contributes to mental health. Indeed, research (Fertuck, Bucci, Blatt, & Ford, 2004; Watson, 1996) showed that more vivid descriptions of psychological experiences, namely higher levels of referential activity, have been found to be positively correlated with therapeutic change.

In line with these paradigms, Şimşek (2010) proposed and operationalized the concept of 'gap between experience and language' (GAP), considered to be an individual difference variable. According to this conceptualization, there exists a permanent GAP between personal experiences and the corresponding words in language, since the referents of these psychological events are not concrete and, thus, not self-evident to the individual. This makes it hard to comprehend inner psychological experiences using the linguistic tools available. The functions of language, for example, epistemic and communicative, are considered to contribute to the lessening of GAP. The epistemic function is related to individual perception of the reliability of language as a tool for obtaining knowledge of or representing inner psychological experiences in a private or intrapersonal realm. "The self,

therefore, may be operationalized as the symbolic organization of phenomenal experiences by language in a private and relatively stable framework” (Şimşek, 2010, p. 68). The communicative function is the tendency to consider language as a reliable means for communicating those inner experiences. Individuals differ in their perception of language as a means of acknowledging inner psychological experiences through language (epistemic function) and as a means of expressing them to others (communicative function). As the levels of these functions decrease, the GAP increases that results in negative emotions such as anxiety and depression. Şimşek’s (2010) findings, indeed, showed that the Beliefs about Functions of Language Scale (BAFL), as an operational definition of GAP, was positively correlated with indicators of mental illness such as depression and anxiety, in addition to its negative correlation with self-knowledge (e.g., self-concept clarity).

These findings provide strong support for a shift in the focus of current mental health research toward language and related domains (Angus, Levitt, & Hardtke, 1999; Owen, 1991). According to this paradigm shift, namely linguistic or narrative turn (Neimeyer & Mahoney, 2002; Shi-xu, 2000), mental health or illness could be illuminated by language-based inquiry, which considers language, rather than simply an indicator of human mentality or cognition, as a fundamental tool for constituting individual reality. Referring to the meaning making process of language, Semin and Fiedler (1992, p. 2), for example, stated that “Knowledge about the world and social reality are, thus, generated, articulated and communicated through the medium of language.” It is clear that the current research on the language-mental health link provides important insights concerning language as a tool for diagnosing mental health problems that affect individuals. We know, thus, that it is possible to diagnose psychological problems through an analysis of the patterns of the use of some linguistic particles, such as pronouns, prepositions, or conjunctions (Pennebaker, Mehl, & Neiderhoffer, 2003), or self and time references, for example, past tense or present tense (Pennebaker and Stone, 2003). The issue of the processes through which language itself contributes to mental health, however, has been underemphasized.

Mediator Role of Emotion Regulation

There is only one direct test of mediatory process concerning the relationship between language and mental health, to our knowledge, by Şimşek and Kuzucu (in press), who showed that self-concept clarity mediated the relationship between GAP and mental illness, for example, depression, anxiety, and alexithymia. The literature, however, proposes another important mediator, emotion regulation, which basically refers to a set of processes through which emotions are regulated (Gross, 1999) although there are different conceptualizations of this process. Regulation here refers to the ability of individuals to manage all emotionally charged states such as mood, stress, and core affect (Koole, 2009), which is “a key factor in preventing emotion arousal from disrupting or overwhelming cognitive and action

systems” (Izard et al., 2008, p. 371). Emotion regulation has been recognized as one of the most important factors in general mental health (Gross & Munoz, 1995), and found to underlie social adaptation and adjustment (Denham, Zoller, & Couchoud, 1994; Kopp, 1989; Southam-Gerow & Kendall, 2002), as well as depression (Gross & Munoz, 1995; Gross, 1999; Southam-Gerow & Kendall, 2002).

The importance of language in emotion regulation is clearly predictable, given that the connection between language and experience has been considered to be closely related to the conceptualization and understanding of all inner psychological experiences (Bucci, 1984; Şimşek, 2010). It is worth mentioning at this point that, as Şimşek (2010) stated, personal realities can be re-constructed in GAP by the use of language. From a constructivist view, Guidano (2002) claims that this individual meaning making process is only possible through the reflexive ability of one’s symbolic, linguistic capacities, which, in turn, are considered as the basis of almost all psychological phenomena. In order to construct meaning, according to Guidano, “the person will first have to symbolize the bodily felt sense as, for instance, ‘feeling afraid’” (p. 186), the beginning of internal *reality*. Indeed, a review on emotion regulation literature shows that language and language related factors have a critical impact in the development and a pursuit of emotion regulation. Southam-Gerow and Kendall (2002), for example, state that a lack of expression of emotions via language can lead to inadequate emotion regulation in children, resulting in adjustment problems in later years. Research also showed that the levels of cognitive-language abilities of both children (Denham et al., 1994) and adolescents (O’Kearney & Dadds, 2005) are associated with emotion understanding and/or emotional difficulties.

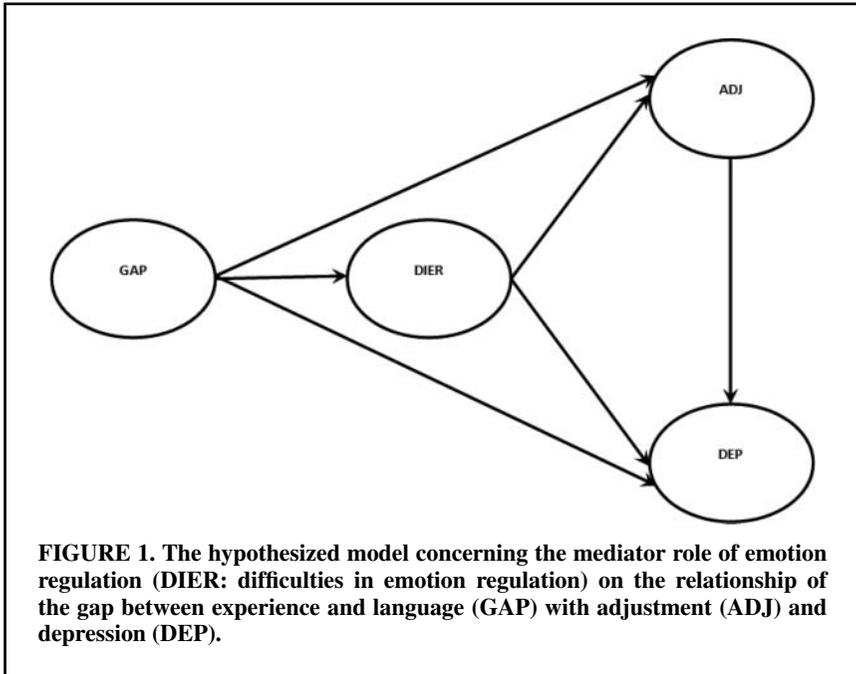
Beyond these developmental studies, research has also indicated that interventions on language use contribute to both mental health and emotional processing. Clarke (1991, 1996), for example, gives clear examples of how transforming emotionally charged experiences into words makes the therapy successful, concluding that verbal expression of emotional content leads to a better understanding of that emotion experience. In other words, both the expression of emotional content and the accompanying feeling of awareness lead to improved mental health. Research by Watson (1996) shows that clients’ access to emotional experience increases proportionally with the amount of referential activity that refers to vivid descriptions of the problematic situation. Pennebaker and Chung (2007) speculate, in the same vein, that language contributes to mental health via the expression of inner psychological experiences, since this is an efficient way of assigning a structure and meaning to experiences, which results in the alleviation of the maladaptive effects of incomplete emotional processing. As Pennebaker and Chung (2007) indicated, findings from emotion language studies showed that individuals with a greater capacity to differentiate negative emotions are more likely to engage in various emotion regulation strategies (Feldman, 1995; Barrett, 1998; Barrett, Gross, Conner, Christensen, & Benvenuto, 2001). This is so, according to Pennebaker and

Chung (2007), because an adequate representation of emotion experience allows individuals make attributions and effectively plan for future actions.

Present Research and Hypotheses

Research indicates that psychosocial adjustment and depression are among the most important problems faced by adolescents (Ialongo, Edelsohn, & Kellam, 2011; Masten et al., 2005). Moreover, adolescence is known as a period characterized by new psychological experiences and emotions (Arnett, 1999), which may not be easy to express via language. All the aforementioned literature indicates the likelihood that emotion regulation is a possible mediator between adolescent GAP and mental health, for example, depression and adjustment. Thus, we tested a structural equation model which indicates that difficulties in emotion regulation mediate the relationship of GAP with adjustment and depression, as portrayed in Figure 1.

As the literature also indicates that adjustment problems are among the most important factors contributing to depression in the period of adolescence (Smokowski, Mann, Reynolds, & Frazer, 2004; Valdez, Lambert, & Ialongo, 2011), a path from adjustment to depression is also included into the model.



The previously mentioned literature indicates a causal direction from language, for example, GAP, to emotion regulation, as well as mental health. However, the reverse causal direction has been indicated, although by a very limited number of researchers. These include van Staden and Fulford (2004), who showed that semantic usage of first person pronouns marked recovery in a course of psychotherapy. In view of the conclusions of this small body of research, it was decided to test two alternative models, one in which the indicators of mental health, depression and adjustment problems contribute to emotion regulation via the effects of GAP, and the other in which emotion regulation contributes to mental health by the mediator role of GAP.

Method

Participants

High school students from nine different schools from the Eastern part of Turkey (220 female, 154 male) formed the sample of this study. The age of the participants ranged from 15 to 17, with mean of 16.08 and standard deviation of 1.72. All scales were administered in one lab session.

Variables and Measures

The Gap Between Experience and Language. The Beliefs about the Functions of Language Scale (BAFL), developed by Şimşek (2010), was used to measure personal perceptions of the GAP. The measure consisted of two factors, epistemic and communicative functions, with acceptable internal consistencies, $\alpha = .70$ and $\alpha = .83$, respectively. The epistemic function refers to the personal sense of confidence in language as a reliable tool for exploring and understanding inner psychological experiences. This factor includes five items, such as “I believe that the real meaning of my experiences is beyond language,” and “I think there is a gap between my feelings and the corresponding words.” The communicative function taps personal perceptions in order to evaluate the effectiveness of language as a means of sharing psychological experiences with others, with seven items, such as “I do not feel people can fully understand the words I use to express myself,” and “I feel words can reflect my feelings exactly to other people.” In the present study, internal consistency estimates for the epistemic and communicative functions were $\alpha = .78$ and $\alpha = .80$, respectively.

Adjustment. The Reynolds Adolescent Screening Inventory (RAASI – Reynolds, 2001), a 32 item self-report measure (e.g., “If someone told me to do something, I did the opposite; I was very lonely”) was used to evaluate adolescent overall psychological adjustment, including antisocial behavior, anger control behavior, emotional distress, and positive self. The adaptation of the scale to Turkish culture was conducted by Kocayörük (2009), who reported a high level of the internal consistency coefficient ($\alpha = .91$) for RAASI, found to be .93 in the present study.

Depression. The depression sub-scale of the Brief Symptom Inventory (BSI) was used to measure depression levels of the participants. It consists of 12 items rated on a 5-point Likert-type scale, anchored by 1 = not at all to 5 = extremely. These items are all core symptoms of depressive illness such as “feeling lonely,” “feeling blue,” “feeling no interest in things,” and “feelings hopeless about future.” The scale, developed by Derogatis (1992) as a shortened version of the SCL-90-R, was adapted to Turkish by Şahin and Durak (1994). The Cronbach’s Alpha reliability coefficients were found to be acceptable for the Turkish form (.95 to .96). The internal consistency coefficient for the present data was .90.

Emotion Regulation. This study assessed adolescents’ emotion regulation level using the Difficulties in Emotion Regulation Scale (DERS), developed by Gratz and Roemer (2004). The DERS has six sub-scales: (1) lack of awareness of emotional responses, called “awareness”; (2) lack of clarity of emotional responses, called “clarity”; (3) non-acceptance of emotional responses, called “non-acceptance”; (4) limited access to effective strategies (strategies); (5) difficulties in controlling impulsive behavior when experiencing negative affect, called “impulse”; (6) difficulties in engaging in goal directed behavior when experiencing negative affect, called “goals.” The scale, consisting of 36 items with a 5-point Likert-type scale, was adapted to Turkish by Ruganci and Gencoz (2010), who reported a high Cronbach’s Alpha coefficient of .94. In the present study, Cronbach’s Alpha for this scale was .91.

Results

Test of the Measurement Model

The measurement model specified that the posited relations of the observed variables to their underlying constructs were allowed to intercorrelate freely. Five latent variables were used in the structural equation model testing: *GAP*, *difficulties in emotion regulation (DIER)*, *depression*, and *adjustment*. The GAP and emotion regulation latent variables were defined using the composite scores of the original factors: epistemic function and communicative function sub-scales of BAFL to represent GAP, and six sub-scales of DERS (awareness, clarity, non-acceptance, strategies, impulse, and goals) to represent difficulties in emotion regulation. Three parcels were created to represent the depression latent variable, and four to represent adjustment. Although there are different kinds of item parceling, the method used in this study creates relatively equivalent indicators by spreading “better” and “worse” items across the different parcels (Little, Cunningham, Shahar, & Widaman, 2002). In order to create parcels as indicators for depression and adjustment latent variables, items were rank ordered by the size of the item-total correlation and summing sets of items to obtain equivalent indicators for those constructs.

CMV has been considered one of the most important problems caused by the measurement method (Podsakoff, MacKenzie, Podsakoff, & Lee, 2003), and

shown to result in biased parameter estimates (Johnson, Rosen, & Djurdjevic, 2011). As all scales were applied during a single meeting with the same participants, an anticipation of a common method variance (CMV) was expected to influence covariances among the variables. Podsakoff et al. (2003) stated that a “consistency effect” is a natural result of participants’ inclination to seek a consistency between their cognitions and attitudes. The researchers proposed a method latent variable, which could be incorporated into a measurement model and, thus, make it possible to test the effect of this confounding variable on the relationships among all research variables. CMV is considered to exist in the measurement where there is a statistically significant difference between two measurement models, one in which no method effect is identified, and the other in which a method latent variable is allowed to load on all observed variables. One solution in such a situation is partialing out of this method effect from the structural model in order to obtain unbiased estimations of the relationships among the variables.

Means, standard deviations, and zero-order correlations for the 15 measured variables are shown in Table 1. All skewness and kurtosis values were less than 1, ranging from 0.035 to 0.535 for skewness and from 0.185 to 0.698 for kurtosis, indicating that there is no problem in terms of normality assumption.

An initial test of the measurement model resulted in a relatively poor fit to the data, $\chi^2(84, N = 374) = 331.12, p < .05$; GFI = 0.89; CFI = 0.97; SRMR = 0.055; RMSEA = 0.089 (90 percent confidence interval for RMSEA = 0.079–0.099). An inspection of the results provided indicated that an indicator of the DIER latent variable (self-awareness sub-factor of the DERS) had a very small factor loading (.17), in addition to many modifications concerning this indicator produced by the LISREL 8.8 program (Joreskog & Sorbom, 1993). Model trimming was carried out by deleting this variable from the measurement model, which resulted in a much better model: $\chi^2(71, N = 374) = 199.25, p < .05$; GFI = 0.93; CFI = 0.99; SRMR = 0.033; RMSEA = 0.070 (90% confidence interval for RMSEA = 0.058–0.081). Indeed, a chi-square difference test (131.87, 13; $p < .001$) showed that this revised model better fitted to the data.

In order to identify the effect of the CMV on the measurement model, it was decided to test a model in which method latent variable was defined as a common factor, having loadings to all observed variables. The covariance between this latent variable and all other variables was set to zero, while its variance to 1.00 for achieving identification. This model produced a good fit to the data as indicated by the following statistics: $\chi^2(57, N = 374) = 92.09, p < .05$; GFI = 0.97; CFI = 1.00; SRMR = 0.025; RMSEA = 0.041 (90% confidence interval for RMSEA = 0.024–0.055). A chi-square difference test (107.16, 14; $p < .001$) showed that this model fitted to the data better than the previous model, indicating a considerable amount of method bias in the data. Standardized parameter estimates for this measurement model are presented in Figure 2.

TABLE 1. Means, Standard Deviations, and Intercorrelations of Observed Variables

Observed Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. EPIS	14.81	3.84	—													
2. COMM	20.85	6.31	.59**	—												
3. Clarity	16.23	4.19	-.28**	-.38**	—											
4. Awareness	20.28	4.42	.03	-.06	.42**	—										
5. Impulse	15.09	5.30	.34**	.41**	-.44**	-.06	—									
6. Non-acceptance	13.78	5.21	.20**	.28**	-.31**	-.02	.54**	—								
7. Goals	16.23	4.65	.35**	.38**	-.38**	.08	.59**	.41**	—							
8. Strategy	19.49	7.01	.32**	.41**	-.45**	-.06	.74**	.56**	.57**	—						
9. ADJ_P1	28.09	5.34	-.37**	-.44**	.45**	.09	-.55**	-.42**	-.52**	-.63**	—					
10. ADJ_P2	29.78	5.44	-.35**	-.40**	.31**	.09	-.52**	-.31**	-.36**	-.50**	.71**	—				
11. ADJ_P3	25.52	4.98	-.34**	-.39**	.33**	.07	-.57**	-.39**	-.37**	-.52**	.70**	.79**	—			
12. ADJ_P4	26.36	5.48	-.42**	-.40**	.38**	.06	-.52**	-.39**	-.51**	-.59**	.75**	.69**	.65**	—		
13. DEP_P1	11.08	3.92	.34**	.39**	-.36**	.09	.50**	.41**	.53**	.62**	-.68**	-.52**	-.52**	-.65**	—	
14. DEP_P2	10.28	4.03	.42**	.40**	-.31**	.08	.52**	.39**	.47**	.63**	-.68**	-.59**	-.55**	-.65**	.73**	—
15. DEP_P3	9.88	3.88	.41**	.41**	-.38**	.04	.52**	.42**	.50**	.63**	-.69**	-.58**	-.58**	-.69**	.78**	.82**

Notes. $N = 374$; 1. EPIS = Epistemic function subscale of the Beliefs about Functions of Language Scale; 2. COMM = Communicative function of the Beliefs about Functions of Language Scale; 3–8 = Sub-factors of the Difficulties in Emotion Regulation Scale; ADJ_P1-P4 = Four parcels created from the Reynolds Adolescent Screening Inventory; DEP_P1-P3 = Three Parcels created from depression sub-scale of the Brief Symptom Inventory. * $p < .05$. ** $p < .01$.

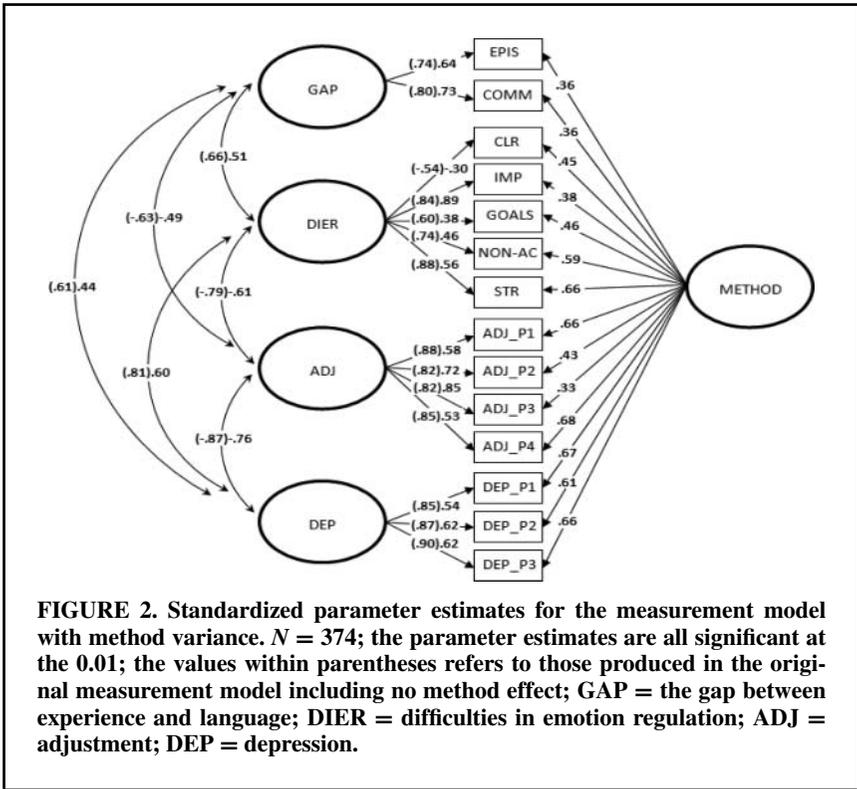


FIGURE 2. Standardized parameter estimates for the measurement model with method variance. $N = 374$; the parameter estimates are all significant at the 0.01; the values within parentheses refers to those produced in the original measurement model including no method effect; GAP = the gap between experience and language; DIER = difficulties in emotion regulation; ADJ = adjustment; DEP = depression.

As can be seen from Figure 2, the paths from method latent variable to the indicators of other latent variables are moderate or high. This effect resulted in a decrease in correlations among the latent variables. In particular, the association between DIER and depression showed a dramatic decrease from .81 to .60.

Test of the Structural Model

The possibility of fit to data by coincidence was eliminated by testing two alternative models before the proposed model. A test of all structural models was carried out by controlling method effect. In the first alternative model, the locations of GAP and DIER reversed, assigning GAP as the mediator between DIER and mental health indicators of emotion regulation and depression. This model resulted in an acceptable fit to the data: $\chi^2(59, N = 374) = 137.69, p < .05$; GFI = 0.94; CFI = .99; SRMR = 0.040; RMSEA = 0.060 (90% confidence interval for RMSEA = 0.047–0.078). In complete contrast with to the proposed model, in the second alternative model, GAP was considered as a mediator between mental health indicators (adjustment and depression) and DIER. This model also

produced an acceptable fit with the following statistics: $\chi^2(60, N = 374) = 155.26$, $p < .05$; GFI = 0.93; CFI = .98; SRMR = 0.045; RMSEA = 0.065 (90% confidence interval for RMSEA = 0.053–0.078).

Test of the proposed model produced better goodness of fit statistics than the alternative models: $\chi^2(59, N = 374) = 102.58$, $p < .05$; GFI = 0.96; CFI = .99; SRMR = 0.033; RMSEA = 0.045 (90% confidence interval for RMSEA = 0.030–0.059). It was clear that the proposed model was better than the first alternative since the degrees of freedom of these models were equal. A chi-square difference test (52.68, 1: $p < .001$) indicated that the proposed model was also better than the second alternative. Thus, the results suggested that, among all models, the proposed model is the best in accounting for the variance in the data.

In order to test the mediation hypotheses, a nested models strategy was used. In the first step, the path from GAP to depression was included into the model and yielded the following statistics: $\chi^2(58, N = 374) = 102.68$, $p < .05$; GFI = 0.96; CFI = .99; SRMR = 0.033; RMSEA = 0.045 (90% confidence interval for RMSEA = 0.030–0.059). A chi-square difference test (0.10, 1: $p > .05$) indicated that adding the path to the model produced no improvement, thus providing support for a full-mediation situation for the relationship between GAP and depression. In the second step, the path from GAP to adjustment was added to the model and, compared to the model above without this path, produced a better fit [$\chi^2(58, N = 374) = 91.98$, $p < .05$; GFI = 0.97; CFI = 1.00; SRMR = 0.025; RMSEA = 0.040 (90% confidence interval for RMSEA = 0.023–0.054)]. This improvement was supported by the chi-square difference test (10.60, 1: $p < .01$). This result indicated that the path from GAP to adjustment should be retained in the model. The standardized parameter estimates for the final model are presented in Figure 3.

It can therefore be concluded that the relationship between GAP and adjustment was partially mediated by DIER, while its relationship with depression was fully mediated by DIER and adjustment. A final conclusion was that the relationship between DIER and depression was partially mediated by adjustment. As can be seen from Figure 3, this final model accounted for 25% of the variance in DIER, 41% of the variance in adjustment, and 61% of the variance in depression.

Discussion

This research, focused on a group of adolescents, aimed to illuminate the mediatory processes in the relationship between GAP and mental health, for example, adjustment and depression. The results supported the initial assumption that emotion regulation plays a potentially mediatory role in this association. There were a number of other conclusions in this respect. First, it was found that the relationship between GAP and adjustment was partially mediated by emotion regulation. The relationship between GAP and depression, on the other hand, was

found to be fully mediated by both adjustment and emotion regulation, given that adjustment was considered to be a mediator between emotion regulation and depression. Finally, as expected, the relationship between emotion regulation and depression was partially mediated by adjustment.

The two main merits of the study can be considered: (a) first, its contribution to the understanding of processes concerning the relationship between language use and two important mental health indicators in adolescents; (b) second, the increased accuracy of the parameter estimates, achieved by controlling bias in the measurement model by partialing out a method latent factor. To our knowledge, not only is this the first study to research these processes, but also it provides a specific focus on adolescents, and, furthermore, with a high level statistical conduct. Moreover, we tested alternative models in which the causal direction is somewhat reversed and results provided strong statistical support for the proposed model. Thus, it seems more plausible to argue that the use of language would be associated with mental health through different mediatory processes. Although van Staden and Fulford (2004) showed some indications that the reverse could be the case, their findings were based on a single, extremely limited domain of language, that is, personal pronouns, and thus could not be considered representative of “language” in its true sense.

Language, always an important issue in the history of psychology, has become an attractive research topic in the field in recent years. Research findings from two labs, Pennebaker’s WP (1993) and Bucci’s MCT (1984), showed that there is an inclination for individuals to connect language or words and inner experiences

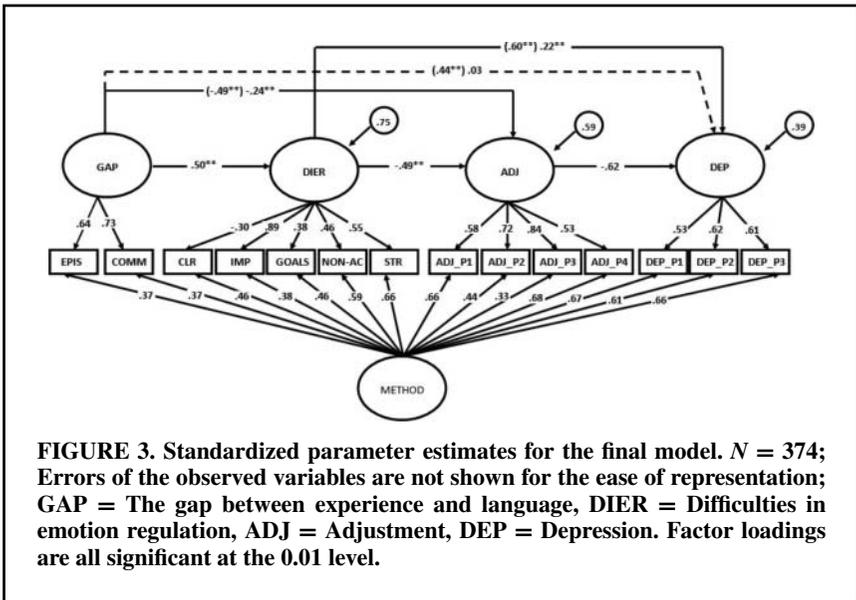


FIGURE 3. Standardized parameter estimates for the final model. $N = 374$; Errors of the observed variables are not shown for the ease of representation; GAP = The gap between experience and language, DIER = Difficulties in emotion regulation, ADJ = Adjustment, DEP = Depression. Factor loadings are all significant at the 0.01 level.

in problematic situations, such as adjustment to college, trauma or stress. Accordingly, connecting linguistic markers with the experiences to which they refer was shown to be beneficial in reducing high level of negative emotions such as depression (Şimşek, 2010; Şimşek and Kuzucu, in press), and in adjustment to the environmental changes (Pennebaker & Keough, 1999). Less clear, however, in this research area, is the mediatory processes through which language use contributes to mental health.

To clarify this issue, Şimşek (2010) proposed a general model of language use, according to which the gap between experience and language is considered an enduring personal characteristic which varies among individuals, and contributes negatively to mental health. As language is the only way to assign meaning to inner psychological experiences, experiences without corresponding words would result in negative emotional reactions and, thus, mental illness. Indeed, Şimşek and Kuzucu (in press) showed that self-concept clarity mediates the relationship of GAP with anxiety, depression, and alexithymia.

The present study focused on another mediator, e.g., for example, emotion regulation, in a group of adolescents, since adolescence has been defined as a period of storm (Arnett, 1999), which brings about new experiences and different emotions not easily expressed via language. Given that language was considered to be important in the regulation of inner experiential world (Denham et al., 1994; O’Kearney & Dadds, 2005; Pennebaker & Chung, 2007; Southam-Gerow & Kendall, 2002), we considered emotion regulation as an important mediator between GAP and mental health in adolescence. The results not only supported this notion, showing that the relationship between GAP and adjustment was partially mediated by emotion regulation, but also revealed that the relationship of emotion regulation with depression was partially mediated by adjustment, consistent with earlier research findings on the contribution of adjustment to depression (Smokowski et al., 2004; Valdez et al., 2011).

The findings of the present study therefore underline the importance of GAP in emotion regulation, and issue which needs further scientific investigation by future research. Past research has already implied several ways in which the expression of emotional experiences via language contributes to emotion regulation. An important proponent is Greenberg and Lepore (2004), who stated that recent research findings concerning WP indicate that the health benefits of emotion expression via language cannot be restricted merely to traumas or adjustment problems, and findings from the authors’ own labs indicated that writing about recent or ongoing events also contributed positively to mental health. This suggests that the inhibition model behind the WP may be valid. This is because, rather than the expression of traumas reducing the negative effects of chronic inhibition on physiological systems (e.g., the central nervous and immune systems), benefits may instead be due to the general perceptions of control and mastery over emotional reactions enabled by the expression of emotions, as Greenberg and Lepore suggest. It may be the case, as proposed by Şimşek (2010), that the functions of language, epistemic

and communicative, play a role in lessening to the GAP, and, thus could facilitate emotional regulation via its effects on the feelings of control. It is also possible that expression via language could facilitate assigning a structure to embodied experiences (Pennebaker & Chung, 2007), and, thus, could contribute to emotion regulation. The viability of these alternative processes is an important area for future research.

Although the present research has contributed new material to the literature, the hypotheses tested were based only on correlational data. Future research should test the hypotheses using experimental or longitudinal data. The results presented here showed that the relationship between GAP and adjustment was partially mediated by emotion regulation, which of course implies the existence of other mediators. Therefore, it is importance that future research should also focus on other potential mediator variables.

AUTHOR NOTES

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