Relationships Among Emotional Regulation, Conflict Management Style, and Language Ability

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Abstract

The present study investigated the relationships among language ability, emotional regulation, and conflict management style in college students. 37 undergraduate students completed a series of four behavioral assessments aimed at measuring their nonverbal IQ (Kaufman Brief Intelligence Test, 2nd Edition, KBIT-2), emotional regulation (Strengths and Difficulties Questionnaire, SDQ), language ability (Peabody Picture Vocabulary Test, 4th Edition, PPVT4) and conflict management style (Dutch Test for Conflict Handling, DUTCH). Analyses showed that language ability was significantly related to the forcing conflict management style, while prosocial ability was related to compromising conflict management style. Many relationships were trending towards significance, such as compromising and language, language ability and prosocial ability as well as peer problems and compromising. Evaluations of the results suggest that emotional intelligence and social competence may play a role in the relationships at hand. Further research is necessary in order to get a more conclusive depiction of the relationships among language ability, emotional regulation, and conflict management style.

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Introduction

Language plays an important role in the human experience, whether it be for understanding the world around us, or how to interact with one another every day. Our interactions and behaviors are dependent upon our verbal capacities and affect every aspect of our lives. Language skills are fundamental for "self-reflection, verbal mediation, response inhibition and behavioral direction" (Gallagher, 1999). Therefore, language determines how we regulate our thoughts and conduct, as well as determines certain social outcomes. The main purpose of the proposed study was to examine whether language ability and emotional regulation, two factors that influence every individual behavior on an everyday basis, effectively predict conflict management style.

Language Ability and Social Emotional Functioning

Social emotional functioning can be defined as the ability to express and manage emotions, and establish positive and rewarding relationships with others (Cohen et al., 2005). Language ability plays a role in the regulation of emotions in social situations and goes hand in hand with the development of emotion in children. For instance, as children go from toddlerhood to preschool age, temper tantrums occur less frequently as they start to cultivate some forms of self-regulation (Roben et al., 2013). This outcome could in part be because of improvement of language skills due to the assumed role of language development in the development of self-regulation (Roben et al., 2013). Development of linguistic skills also allow children to express their needs with words rather than acting in frustration, and engender ways to focus their attention (Cole et al., 2010). By contrast, language impairment can lead to problems with emotional control and difficulties in social settings. For instance, previous research discovered the connection

between poor receptive vocabulary (i.e., the collection of words one can understand) and peer rejection because children prefer to play with other children with above average receptive vocabulary (Monopoli & Kingston, 2012). Furthermore, Joffe and Black (2012) showed how adolescents with low receptive and language ability have more social, emotional and behavioral difficulties, which may suggest that many different aspects of language may play a role in emotional regulation.

Moreover, since children learn about social skills in context through practice with peers, peer rejection takes away the child's ability to improve their understanding of appropriate verbal responses (Durkin & Conti-Ramsden, 2010). Another study discovered how a child's use of emotion language (i.e., language used to refer to emotional states) is linked to their emotional and social competence, as well as an important tool for regulating emotions (Fabes et al., 2001). It is thus possible that the combination of language impairment with poor emotion regulation skills might lead to serious social difficulties (Fujiki et al., 2002), which could include likeability and conflict.

Another explanation into why language ability plays a role in social emotional functioning is through the development of theory of mind (i.e. the ability to attribute mental states to others in order to predict their behavior). Research has highlighted how theory of mind and language development are go hand in hand (Tager-Flusberg, 2000), and that a relationship among, language, ToM, and social-emotional functioning may exist (Vissers & Koolen, 2016). For example, children with SLI are known to have deficits in both development of theory of mind and social-emotional functioning (Andrés-Roqueta et al., 2016), suggesting a connection between them. These difficulties in theory

of mind development along with poor language ability can persist into adulthood (Clegg et al., 2005), and as a result social-emotional functioning may be affected as well. In sum, the relationship between language ability, emotion regulation, and theory of mind development likely affects one's functioning in social settings and may impact how they solve interpersonal conflict.

Language Ability and Conflict Resolution Strategies

The relationship between language ability and conflict resolution strategies may be seen through the development of social cognition (Bakopoulou & Dockrell, 2016). Social cognition refers to how people process, store and apply information about others and social situations. This includes understanding other people's emotions (related to emotion language) as well as social problem solving and conflict resolution (Sharp et al., 2008). Language ability is directly related to social cognition, as better linguistic skills predict a higher level of socio-cognitive competence (Astington, & Jenkins, 1995). Through association, it is plausible that conflict resolution ability may be affected by language ability. To strengthen this argument, previous research suggests that greater verbal capacities allow children to discuss their feelings, interpret others' emotional states and solve interpersonal problems (Dunn, Brown, & Beardsall, 1991). Brinton et al. (2000) discovered that the connection between language deficits, social withdrawal and the absence of prosocial skills leads to children's inability to work in collaborative groups. Part of this could be due to their inability to express themselves verbally when communicating with others, which, in turn, results in frustration and distress. Likewise, children with specific language impairments (SLI) are less likely to propose cooperative solutions to conflicts (Stevens & Bliss, 1995), further suggesting a role of

language in negotiation ability. In line with this finding, children with SLI engaged in a role-play enactment of conflicts activity exhibited physical aggressive behavior, as well as passive and withdrawn reactions such as leaving the scene without resolving the conflict or expecting a non-involved person to solve the conflict in order to avoid the negotiation process (Marton et al., 2005). This finding suggests that there may be multiple conflict management styles in children with SLI. The current study thus investigated whether emotional regulation and language ability relates to similar or distinct conflict management styles.

Social-Emotional Functioning and Conflict Resolution Ability

The exact role of language ability in social-emotional functioning and conflict resolution has yet to be determined, and connections among all three components raise questions about the direct relationship that language ability influences. Like emotion language, emotional intelligence plays a role in how children and adults interact with one another. Salovey & Mayer (1990) introduced this idea of emotional intelligence, defining it as the ability of an individual to monitor one's own and other's emotions, to discriminate among the positive and negative effects of emotion and to use emotional information to guide one's thinking and actions. Studies have shown how language ability influences emotional regulation (Roben et al., 2013; Cole et al., 2010); however, studies also have been conducted to measure emotional intelligence and its effect on conflict resolution ability. One study demonstrated how emotionally intelligent individuals use compromise in appropriate situations which may reflect their ability to recognize and regulate their emotions to enhance relationships with co-workers in order to meet their goals during times of change (Jordan & Troth, 2002). So individuals with

high levels of emotional intelligence may be better able to resolve conflict than their less emotionally intelligent counterparts (Goleman, 1998; Mayer, & Salovey, 1997). Jordan and Troth (2002) were also able to show how conflict management styles reflect levels of emotional intelligence. Participants who scored high on emotional intelligence were more likely to engage in collaborative and problem solving conflict resolution, while participants who scored low on levels of emotional intelligence exhibited avoidant or forceful methods of conflict management. The present study sought to investigate this relationship to see if language ability plays a role in emotional functioning and conflict resolution ability, or if relationships among all three exist.

Thesis Statement

Previous research mainly focused their attention on the relationships between language ability, emotional regulation, and social competence in children and adolescents; however, some longitudinal studies determined that social and behavioral difficulties continue into adolescence and adulthood for individuals with SLI (Clegg et al., 2005). By contrast, little is known regarding the relationships between individual differences in social emotional regulation, conflict management strategies and language ability in young adults without any language deficits. For this reason, the present study expanded this research by examining the conflict resolution ability of young adults as well as its relationship with language ability and social-emotional functioning to test the hypothesis that language ability and social emotional functioning predict conflict resolution ability (See predictive model in Figure 1).

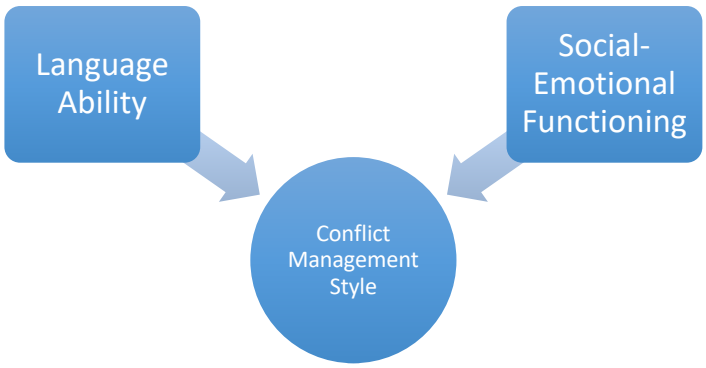

Figure 1. Predictive Model

To that end, a sample of college students were administered a series of standardized measures aimed at evaluating their levels of language ability, social-emotional functioning and conflict resolution style. Conducting the proposed study with a sample of college students is particularly important in light of a study that followed participants from ages five to twenty-five, and found that educational attainment was severely impacted by language impairments, with only three percent of participants in the language disorder group graduating with a college degree (Beitchman et al., 2010). So, it is imperative to study long term effects of language ability in order to encourage future academic success for students with poor language ability.

Methods

Participants

Thirty-seven college students were recruited through the psychology research pool and received course credits for their involvement in the study. The mean age of participants was 19.3 years (SD = 2.08). To be eligible for the study, participants had to be native speakers of English, and had no known hearing deficits and normal or corrected-to-normal vision. In addition, data from participants with a non-verbal IQ score below 85 on the Kaufman Brief Intelligence Test, 2nd edition (KBIT-2) were excluded from the analysis in order to control for potential general cognitive deficits. The final sample consisted of 29 participants. IRB approval was obtained prior to the start of the study, and all participants gave their written consent for their data to be used for research purpose.

Materials and Procedure

A series of four assessments were administered in order to evaluate the participants' levels of non-verbal IQ, language ability, social-emotional functioning and conflict resolution style. The administration of all the measures took approximately 1.5 hours. The non-verbal IQ was used as screening measure and thus not included in data analyses. The order of administration of the remaining three measures was counterbalanced across participants.

Kaufman Brief Intelligence Test, 2nd edition (KBIT-2; Kaufman & Kaufman, 2004). During this test, participants were presented with visual logical patterns missing an element. Participants were asked to pick which one of four images is the most logical missing element in the sequence of the pattern. The test typically takes

15-20 minutes to complete and reports reliability and validity coefficients in the .90s range.

Peabody Picture Vocabulary test, 4th edition (PPVT-4; Dunn & Dunn, 2007). Language ability was assessed using the PPVT-4, which is a test of receptive vocabulary. During the test, participants heard a spoken word and were asked to indicate which one of four pictures best illustrated the word. This test typically takes 15-20 minutes to complete and reports reliability and validity coefficients in the .90s range.

Strengths and Difficulties Questionnaire (SDQ; Goodman, Meltzer, & Bailey, 1998). The SDQ was used to measure the level of social-emotional functioning of the participants. It addresses their behavior, emotions and relationships with other individuals. Participants marked either not true, somewhat true, or certainly true on a series of statements addressing their conduct problems, hyperactivity, emotional symptoms, peer problems and prosocial behavior. For the purposes of this study, the hyperactivity and conduct problems subscales were removed from the analysis of social-emotional functioning.

Dutch Test for Conflict Handling (DUTCH; Van de Vliert, 1997). The DUTCH consists of twenty statements measuring conflict management style. The survey provides scores for five separate dimensions (yielding, compromising, problem solving, forcing, or avoiding), which can be found along two continua (concern for others and concern for self, see Figure 2). The dimensions of compromising and problem solving were a predictor of good conflict resolution while yielding, forcing or avoiding signaled poor conflict resolution ability. Reliability and validity coefficients have been reported in the .64 to .83 range.

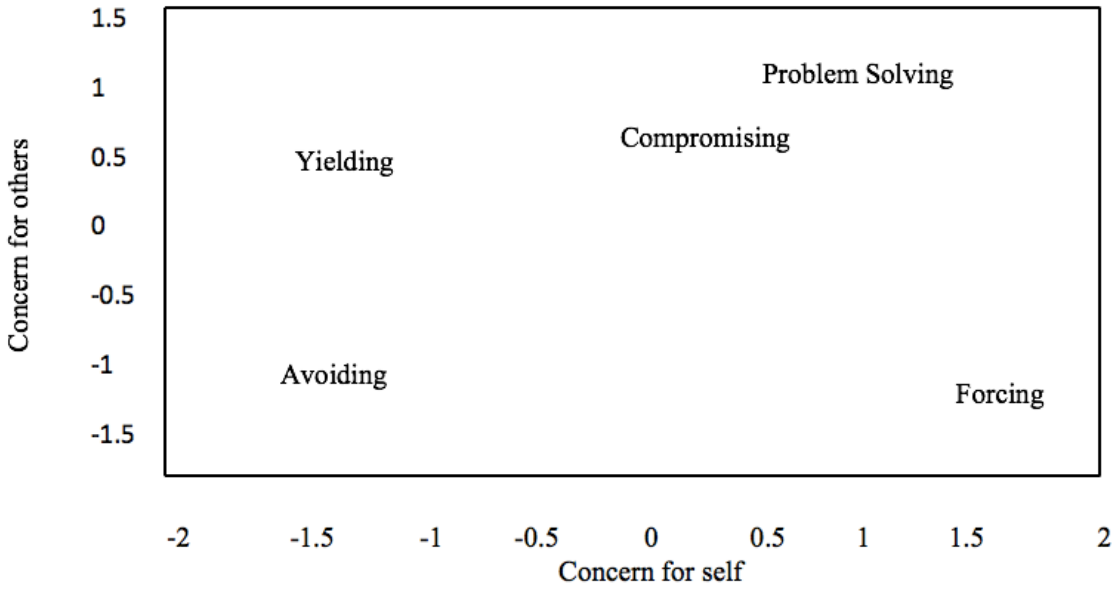

Figure 2. Empirical representation of the five dimensions (DeDrue, 2001).

Results

Table 1 presents the descriptive statistics of the participants for all variables included in the analyses.

Table 1

Descriptive statistics

Measure	Mean	SD	Min	Max
DUTCH Yielding	13.179	1.416	10.000	16.000
DUTCH Compromising	15.750	2.066	12.000	19.000
DUTCH Forcing	13.429	2.755	9.000	18.000
DUTCH Problem Solving	16.893	1.771	12.000	19.000
DUTCH Avoiding	12.929	3.126	5.000	19.000
PPVT	102.500	15.676	78.000	132.000
SDQ Emotional Symptoms	8.857	1.353	5.000	10.000
SDQ Peer Problems	4.643	2.345	0.000	8.000
SDQ Prosocial	2.500	1.427	0.000	6.000

Are Emotional Regulation and Language Ability Related to Conflict Management Style?

Pearson correlations were computed to examine the relationship among all experimental measures (see Table 2). An alpha level of 0.05 was used for all statistical analyses. Language ability and forcing conflict management style were strongly negatively correlated (r = -0.55 p = 0.002, see Figure 3). There was also a significant positive correlation between prosocial ability and compromising conflict management style (r = .45, p = 0.016, see Figure 4). In addition, problem solving and compromising

conflict management styles were positively correlated ($r = 0.59, p < 0.001$). Several correlations also trended toward significance: language ability and compromising conflict management style ($r = 0.32, p = 0.092$), language ability and prosocial ability ($r = 0.36, p = 0.057$), as well as peer problems and compromising conflict management style ($r = 0.37, p = 0.052$).

Table 2

Correlation matrix

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1 DUTCH Yielding	—								
2 DUTCH Compromising	0.168	—							
3 DUTCH Forcing	-0.201	-0.104	—						
4 DUTCH Problem Solving	-0.110	0.590***	0.002	—					
5 DUTCH Avoiding	0.162	-0.313	0.081	0.059	—				
6 PPVT	0.191	0.324	-0.550**	0.082	-0.111	—			
7 SDQ Emotional Symptoms	0.087	0.027	-0.125	0.035	0.158	0.281	—		
8 SDQ Peer Problems	0.229	0.371	0.141	0.169	0.174	0.065	0.310	—	
9 SDQ Prosocial	0.207	0.450*	-0.172	0.303	-0.169	0.363	-0.215	0.058	—

* p < .05, ** p < .01, *** p < .001

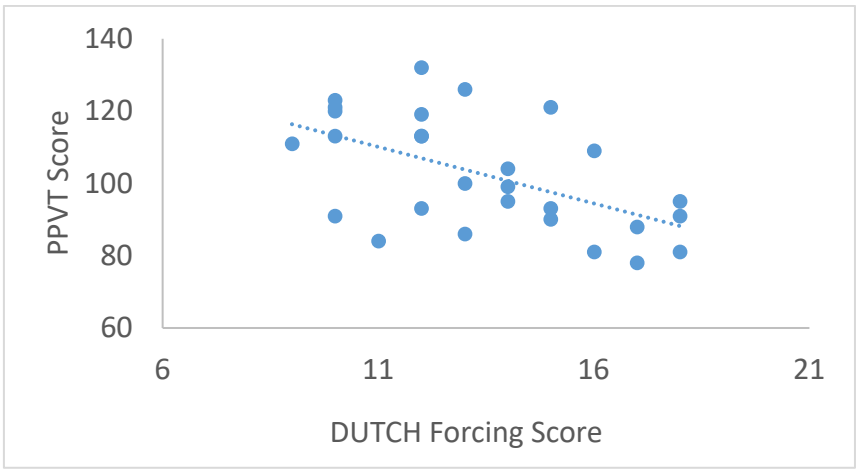

Figure 3. Correlation Between Language Ability and Forcing. The line of best fit is represented by a dotted line.

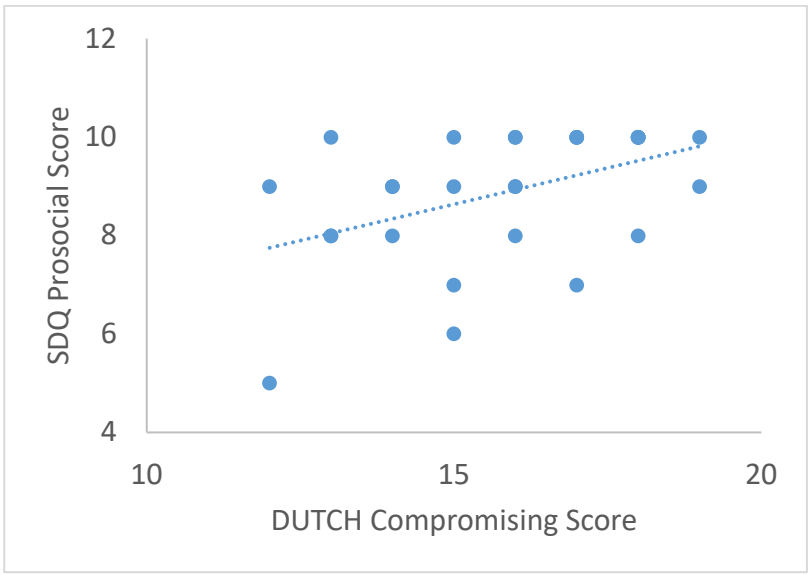

Figure 4. Correlation Between Prosocial Ability and Compromising. The line of best fit is represented by a dotted line.

Do Emotional Regulation and Language Ability predict Conflict Management style?

Multiple regression analyses were conducted with language ability (PPVT), emotional symptoms (SDQ), peer problems (SDQ) and prosocial (SDQ) as predictors and the 5 conflict management styles defined by the DUTCH as outcome variables.

Forcing. The regression model significantly explained 33% of the variance in forcing conflict management style (F (4,23) = 2.89, p = 0.045, r^2= 0.334, adjusted r^2= 0.219). As can been seen in Table 3, PPVT scores significantly contributed to the model, but emotional symptoms, prosocial ability and peer problems did not. The final predictive model was: DUTCH Forcing = (-0.099*PPVT) + (-0.022*SDQ Emotional symptoms) + (0.352*SDQ Peer problems) + (0.037*SDQ Prosocial Ability) + 22.463.

Table 3

Regression results using DUTCH Forcing as the outcome measure

						95% CI	
Predictor	Unstandardized	Standard Error	Standardized	t	p	Lower	Upper
(Intercept)	22.463	3.851		5.834	< .001	14.497	30.428
PPVT	-0.099	0.035	-0.563	-2.819	0.010	-0.171	-0.026
SDQ Emotional Symptoms	-0.022	0.237	-0.019	-0.094	0.926	-0.512	0.468
SDQ Peer Problems	0.352	0.350	0.182	1.006	0.325	-0.372	1.076
SDQ Prosocial Ability	0.037	0.403	0.018	0.091	0.928	-0.797	0.870

Compromising. The regression model significantly explained 35% of the variance in the compromising conflict management style *(F*(4,23) = 3.089, p = 0.036, r^2 = 0.349, adjusted r^2 = 0.236). However, neither PPVT scores nor emotional symptoms,

peer problems or prosocial ability significantly contributed to the model (see Table 4). The final predictive model was: DUTCH Compromising = (0.026*PPVT) + (-0.057*SDQ Emotional symptoms) + (0.518*SDQ Peer problems) + (0.528*SDQ Prosocial ability) + 7.426.

Table 4

Regression results using DUTCH Compromising as the outcome measure

						95% CI	
Predictor	Unstandardized	Standard Error	Standardized	t	p	Lower	Upper
(Intercept)	7.426	2.856		2.601	0.016	1.519	13.333
PPVT	0.026	0.026	0.194	0.981	0.337	-0.028	0.079
SDQ Emotional Symptoms	-0.057	0.176	-0.064	-0.322	0.750	-0.420	0.307
SDQ Peer Problems	0.518	0.260	0.358	1.997	0.058	-0.019	1.055
SDQ Prosocial Ability	0.528	0.299	0.346	1.767	0.090	-0.090	1.146

Yielding. The regression model failed to significantly explain the variance in yielding conflict management style ($F(4,23) = 0.666$, $p = 0.622$, $r^2 = 0.104$, adjusted $r^2 = -0.052$). PPVT scores, emotional symptoms, peer problems, nor prosocial ability contributed to the model (see Table 5). The final predictive model was: DUTCH Yielding = (0.010*PPVT) + (0.016*SDQ Emotional symptoms) + (0.203*SDQ Peer problems) + (0.168*SDQ Prosocial ability) + 10.073.

Table 5

Regression results using DUTCH Yielding as the outcome measure

						95% CI	
Predictor	Unstandardized	Standard Error	Standardized	t	p	Lower	Upper
(Intercept)	10.073	2.296		4.386	< .001	5.322	14.823
PPVT	0.010	0.021	0.112	0.484	0.633	-0.033	0.053
SDQ Emotional Symptoms	0.016	0.141	0.026	0.113	0.911	-0.276	0.308
SDQ Peer Problems	0.203	0.209	0.204	0.971	0.341	-0.229	0.635
SDQ Prosocial Ability	0.168	0.240	0.160	0.698	0.492	-0.329	0.665

Problem solving. The regression model failed to significantly explain the variance in problem solving conflict management style ($F(4,23) = 0.797$, $p = 0.539$, $r^2 = 0.122$, adjusted $r^2 = -0.031$). PPVT scores, emotional symptoms, peer problems, and prosocial ability did not significantly contribute to the model (see Table 6). The final predictive model was: DUTCH Problem Solving = (-0.009*PPVT) + (0.069*SDQ Emotional symptoms) + (0.156*SDQ Peer problems) + (0.448*SDQ Prosocial ability) + 13.094.

Table 6

Regression results using DUTCH Problem Solving as the outcome measure

						95% CI	
Predictor	Unstandardized	Standard Error	Standardized	t	p	Lower	Upper
(Intercept)	13.094	2.844		4.604	< .001	7.210	18.977
PPVT	-0.009	0.026	-0.076	-0.332	0.743	-0.062	0.045
SDQ Emotional Symptoms	0.069	0.175	0.091	0.394	0.697	-0.293	0.431
SDQ Peer Problems	0.156	0.259	0.125	0.602	0.553	-0.379	0.690
SDQ Prosocial Ability	0.448	0.298	0.343	1.507	0.145	-0.167	1.064

Avoiding. The regression model failed to significantly explain the variance in avoiding conflict management style ($F(4,23) = 0.477$, $p = 0.752$, $r^2 = 0.077$, adjusted $r^2 = -0.084$). PPVT scores, emotional symptoms, peer problems, and prosocial ability did not significantly contribute to the model (see Table 7). The final predictive model was: DUTCH Avoiding = (-0.023*PPVT) + (0.160*SDQ Emotional symptoms) + (0.331*SDQ Peer problems) + (-0.255*SDQ Prosocial ability) + 15.956.

Table 7

Regression results using DUTCH Avoiding as the outcome measure

						95% CI	
Predictor	Unstandardized	Standard Error	Standardized	t	p	Lower	Upper
(Intercept)	15.956	5.148		3.100	0.005	5.307	26.605
PPVT	-0.023	0.047	-0.115	-0.487	0.631	-0.120	0.074
SDQ Emotional Symptoms	0.160	0.317	0.120	0.504	0.619	-0.495	0.815
SDQ Peer Problems	0.331	0.468	0.151	0.706	0.487	-0.637	1.299
SDQ Prosocial Ability	-0.255	0.539	-0.110	-0.473	0.641	-1.369	0.860

Discussion

The present study set out to investigate the role of language in emotional regulation and different conflict management styles. Results revealed that language ability predicts a significant amount of variance in forcing strategy, and has a role in compromising. Interestingly, language does not have a significant relationship with social emotional functioning, but prosocial ability (a subset of social emotional functioning) has a relationship with compromising as well. These findings are discussed in turn below.

Forcing and language

The results of this study indicated a role of language ability in predicting forcing in conflict situations. Those who scored high on forcing tended to have poorer language skills. It is noteworthy to reexamine the definition of forcing in order to highlight why this relationship exists between language and forcing. DeDrue (2001) defined forcing as consisting of "threats and bluffs, persuasive arguments, and positional commitments." Since language ability is directly related to social cognition (Jenkins & Astington, 1996), the use of threats and positional commitments (i.e. the responsibility for reaching agreement is on the other party) in conflict management may be an indication of both language deficiencies and social incompetence. McCabe and Meller (2004) found that children with language impairments tend to exhibit behavior deemed as socially incompetent due to their difficulties with interpersonal communication. This deficiency in language may affect how people communicate their intentions, feelings, and problem solving strategies (more specifically negotiation strategies; McCabe & Meller, 2004), which in turn reflects their social incompetence among peers. Stevens and Bliss (1995)

further elaborated on this connection between language, social competence and conflict resolution ability by suggesting that children with social cognitive impairments may use inappropriate conflict resolution strategies because they cannot comprehend the view point of their opponent or may lack the linguistic structures necessary for effective conflict resolution strategies. In the context of forcing, children with language impairments may show difficulties understanding the negative consequences of utilizing threats and physical aggression in managing conflict (Gallagher, 1991).

Relating to positional commitments, a study addressing negotiation ability in school age children found that those with SLI backed only their own choices and refused to listen to the other's opinions or reach an agreement within the group (Brinton et al., 1998). Likewise, a role-play enactment study conducted in an elementary school highlighted how language impairments can lead to this type of forcing conflict management style. One of the children with language impairment was found to use aggressive behavior such as stealing items from other children, criticizing and using harsh language (i.e., "shut up"), mimicking other students, arguing over items, and pretending to hit other children (Brinton et al., 2000).

The results of this study and a few others show how language ability plays a role in forcing or dominating conflict management styles; however, further research is needed in order to accurately depict how this relationship works. Especially in regard to whether other aspects of forcing (such as aggressive behavior) are influenced by language as well.

Prosocial Ability and Compromising

Though the correlation between prosocial ability and compromising was not initially expected, it creates questions regarding the underlying mechanisms behind this

relationship. One possibility is that prosocial ability is related to emotional intelligence. For example, Kolb and Weebe (2001) designed a study to improve emotional intelligence by teaching pre-kinder garden children prosocial skills. They suggested that teaching children to be more emotionally intelligent will result in making them more socially competent and thus exhibit prosocial behaviors such as taking turns, sharing toys, and helping and comforting others. In this situation, taking turns and sharing toys can be seen as compromising as compromising involves making concessions and searching for middle ground (Van de Vliert, 1997). The researchers further proposed that "the concepts of emotional intelligence, prosocial behavior, violence prevention and conflict resolution are so interrelated that they are better discussed or taught as a whole rather than as separate entities" (Kolb & Weebe, p. 40-41, 2001). It is thus possible that this relationship between prosocial ability and compromising occurred due to preexisting connections among many other variables that were not measured in the present study.

Empathy may also play a role in this relationship as there is ample evidence that empathy positively relates to prosocial behavior (Eisenberg & Miller, 1987). Wied, Branje, and Meeus (2007) more specifically addressed the role of empathetic tendencies in conflict management. They discovered that dispositional affective empathy (i.e., the tendency for people to imagine and experience the feelings and experiences of others) was positively related to problem solving. It should be noted that their definition of problem solving is much different from the one offered in the DUTCH problem solving subscale utilized in the present study. For instance, one item on their measure of problem solving included the statement "trying to find solutions that are acceptable to both of us" which lines up with the DUTCH measure of compromising rather than problem solving.

Moreover, another study found moderate correlations between compromising conflict resolution behaviors and emphatic concern in peer conflicts, suggesting that adolescents with higher levels of empathy tend to exhibit more prosocial conflict resolution strategies (Alexander, 2000).

In sum there is some evidence in favor of a relationship between compromising and prosocial ability, but it likely involves many other cognitive and social factors as well, such as emotional intelligence, social competence, and empathy. Due to this overlap, it may be necessary to continue more research into investigating the many interrelations between compromising and prosocial ability.

Language and Compromising

There has been some debate regarding whether or not problem solving and compromising should be treated as the same or separate categories (DeDrue et al. 2001; Bao et al. 2019). In the present study, compromising and problem solving were strongly correlated (r = .59). However, language ability was trending towards a significant small-to-medium correlation with compromising (r = 0.32), but not problem solving (r = 0.08), thus suggesting that these two conflict management styles depend on partially distinct cognitive factors.

The relationship between language and compromising may be in part due to cognitive development, as children with SLI tend to use less cognitively demanding negotiation strategies than children without SLI (Brinton et al., 1998). It is plausible that compromising may be more cognitively demanding than other conflict management styles such as forcing (as discussed above), and thus is utilized less in people with poorer language ability. A subset of cognitive development, social cognition, may better explain

this connection between language and compromising ability. The role of language in social cognition has already been well established (Jenkins & Astington, 1996), and may affect how people resolve conflict. For example, previous studies suggest that reasoning, persuasion, and compromise are more sophisticated strategies in conflict resolution versus using threats and demands, and requires a higher level of interpersonal understanding (Stevens & Bliss, 1995).

Research has exhibited a role of language in these more advanced forms of conflict management strategies such as compromising, but this study failed to find a statistically significantly relationship between language ability and compromising. The strong relationship between problem solving and compromising, and lack of relationship between problem solving and language may support an inquiry into reexamining the DUTCH Test for Conflict Management and whether the categories should be together or separate.

Educational and Clinical Implications

Overall, little research has been conducted on the relationships among language ability, emotional regulation and conflict management style, especially in older populations. The results of this study do shed light upon the role of language in forcing and prosocial ability in compromising, which both can have an impact on careers and education of young adults. Understanding this relationship between language and forcing may lead to better interventions in adolescence that better prepare children to have successful lives in school and the workplace. The results of Kolbe and Weede (2001) showcased how teaching children prosocial skills will result in more compromising behaviors. Programs designed to teach these skills in childhood and adolescence may

thus have an effect on how people resolve conflict in young adulthood and beyond. In order to evaluate how language and social-emotional functioning affect conflict management style, replications of this study with larger sample sizes and potentially different measures of language and conflict management are necessary. Continuation of this research may lead to the creation of interventions that attempt to enhance language skills and social emotional functioning in children before they even reach adulthood.

Limitations and Future Direction

Some limitations presented themselves as the study was being conducted and consist of problems with sample size, and the types of measures used. First and foremost, the sample size for this study consisted of only 37 participants, of which only 28 were used in the final sample for analysis. This small sample limits the significance of the results so replications should be conducted with larger sample size in order to get a better picture of the relationships among language ability, emotional regulation, and conflict management style.

Another limitation pertains to the type of language measure used. A receptive vocabulary test was utilized in order to measure participants' language ability. Thus, the lack of significant relationship between the language measure and some of the conflict management styles may be due to the fact that vocabulary knowledge reflects only a subcomponent of language abilities. Future studies should expand on the type of language measure used, such language comprehension and expressive language. For instance, language comprehension is a complex process that requires more than just knowing the meaning of words, and involves the ability to interpret the intonation of the

speaker (which by itself can gives clues about the speakers' emotional state or intent), grammar (i.e., rules that govern how words are structures in a sentence), metaphor, irony, sarcasm, figures of speech, etc.

Regarding conflict management, the DUTCH was used and remains a valid and reliable measure of different conflict management styles; however, problems revolving around the validity of each independent conflict management style arose while differentiating between problem solving and compromising. Results showed how compromising and problem solving were highly related; however, compromising was related to language ability while problem solving was not. This finding is quite problematic, and suggests that confounding variables may be at play. It may thus be necessary to look into alternative tests of conflict management for future studies, or conduct research into the DUTCH to address its validity.

Conclusion

This study investigated the relationships among language ability, emotional regulation, and conflict management style and discovered significant connections between language and the forcing conflict management style, and prosocial ability and the compromising conflict management style, among other things. Few studies have examined the exact relationships at play, and thus this study sets the stage for further research on the topic. Replications of this study are needed in order to truly have a better picture of these relationships and how they persist into young adulthood.

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Appendix A

IRB Approval Letter

IRB
INSTITUTIONAL REVIEW BOARD
Office of Research Compliance,
010A Sam Ingram Building,
2269 Middle Tennessee Blvd
Murfreesboro, TN 37129

MIDDLE TENNESSEE STATE UNIVERSITY

IRBN001 - EXPEDITED PROTOCOL APPROVAL NOTICE

Tuesday, November 05, 2019

Principal Investigator	**Kristen Huddleston** (Student)
Faculty Advisor	Cyrille Magne
Co-Investigators	NONE
Investigator Email(s)	*klh2ar@mtmail.mtsu.edu; cyrille.magne@mtsu.edu*
Department	Psychology
Protocol Title	***Relationship between language ability, emotional regulation and conflict management style***
Protocol ID	**20-2053**

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXPEDITED** mechanism under 45 CFR 46.110 and 21 CFR 56.110 within the category *(7) Research on individual or group characteristics or behavior.* A summary of the IRB action and other particulars in regard to this protocol application is tabulated below:

IRB Action	**APPROVED for ONE YEAR**		
Date of Expiration	**11/30/2020**	Date of Approval	11/5/19
Sample Size	60 (SIXTY)		
Participant Pool	Target Population 1: Primary Classification: **General Adults (18 or older)** Specific Classification: **MTSU Students** Target Population 2: Primary Classification: **NONE** Specific Classification: **NONE**		
Exceptions	Contact information allowed for coordinating research interactions and to award course credit to certain student participants.		
Restrictions	**1. Mandatory signed adult informed consent.** **2. Approved for direct interaction only; NOT approved for online data collection.** **3. Not approved to collect identifiable information, such as, audio/video data, photographs, handwriting samples, financial information, personal address, driving records, social security number, and etc.** **4. Mandatory final report (refer last page).**		
Approved Templates	MTSU-approved signature informed consent		
Comments	NONE		

Post-approval Actions

The investigator(s) indicated in this notification should read and abide by all of the post-approval conditions (https://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php) imposed with this approval. Any unanticipated harms to participants, adverse events or compliance breach must be reported to the Office of Compliance by calling 615-494-8918 within 48 hours of the incident. All amendments to this protocol, including adding/removing researchers, must be approved by the IRB before they can be implemented.

Continuing Review **(The PI has requested early termination)**

Although this protocol can be continued for up to THREE years, The PI has opted to end the study by 11/30/2020 **The PI must close-out this protocol by submitting a final report before 11/30/2020 Failure to close-out may result in penalties including cancellation of the data collected using this protocol.**

Post-approval Protocol Amendments:

Only two procedural amendment requests will be entertained per year. *In addition, the researchers can request amendments during continuing review. This amendment restriction does not apply to minor changes such as language usage and addition/removal of research personnel. .*

Date	Amendment(s)	IRB Comments
NONE	NONE.	NONE

Other Post-approval Actions:

Date	IRB Action(s)	IRB Comments
NONE	NONE.	NONE

Mandatory Data Storage Requirement: All research-related records (signed consent forms, investigator training and etc.) must be retained by the PI or the faculty advisor (if the PI is a student) at the secure location mentioned in the protocol application. The data must be stored for at least three (3) years after the study is closed. Subsequently, the data may be destroyed in a manner that maintains confidentiality and anonymity of the research subjects.

The MTSU IRB reserves the right to modify/update the approval criteria or change/cancel the terms listed in this letter without prior notice. Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board
Middle Tennessee State University

Quick Links:

- Post-approval Responsibilities: http://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php
- Expedited Procedures: http://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php