Attachment and psychological well-being among adolescents with and without disabilities in Kenya: The mediating role of identity formation

Amina Abubakar a,b, *, Itziar Alonso-Arbiol c, Fons J.R. Van de Vijver a, Margret Murugami d, Lubna Mazrui d, Josephine Arasa e

a Department of Cross-Cultural Psychology, Tilburg University, The Netherlands
b Department of Child and Adolescent Studies, Utrecht University, The Netherlands
c Department of Personality, Psychological Assessment and Treatment, University of the Basque Country UPV/EHU, Spain
d Department of Special Education, Kenyatta University, Kenya
e Department of Psychology, United States International University-Africa, Kenya

Keywords:
Attachment
Peers
Identity
Well-being
Disability
Kenya

Abstract

The current study is aimed at evaluating the relationship between attachment and identity development, and their influence on psychological well-being in adolescents with and without disabilities in Kenya. The sample was composed of 296 adolescents (151 with disabilities and 145 without any disability). The mean age in our sample was 16.84 years (SD = 1.75). Adolescents with disabilities had significantly lower scores in identity formation, paternal attachment, and life satisfaction. A path model indicated that identity formation partially mediated the relationship between secure attachment and psychological well-being. Our findings indicate that both parent and peer attachment play an important role in the identity formation and psychological well-being of adolescents in Kenya, irrespective of a disabling condition. A multigroup analysis indicated that while the structure of the relationship between variables held for groups, the pattern and strength of the relationships differed. Implications for practice, especially the guidance and counseling services in schools, are discussed.

© 2013 The Foundation for Professionals in Services for Adolescents. Published by Elsevier Ltd. All rights reserved.
Secure attachment is viewed as one of the salient factors influencing optimal child development and well-being (Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Cassidy & Shaver, 1999). The quality of attachment to parents among adolescents has been linked to various outcomes, including positive self-esteem (Gomez & McLaren, 2007), the absence of problem behavior (Dekovic, 1999), and depression (Allen et al., 2007). During adolescence, attachment to peers and friends becomes appreciably more important than in childhood (Nelis & Rae, 2009). It has been suggested that, during adolescence, some of the parent attachment functions are shifted to peers without completely disassociating from parents (e.g., Hazan & Zeifman, 1994). Following this line of reasoning, it would be expected that both parent and peer attachment would make a significant and unique contribution in defining well-being in the adolescent population. However, findings regarding peer attachments are inconsistent. Some studies show a positive relationship between peer attachment and psychological well-being (Nelis & Rae, 2009), whereas others indicate limited (if any) positive influence of peer attachment (Wilkinson & Wallford, 2001). This pattern suggests that there may be more links than direct pathways between peer attachment and psychological well-being, and we propose that other factors — specifically personal identity — may mediate this relationship.

Insecure attachment to parents is likely to lead to poorer identity formation and lowered psychological well-being among adolescents with disabilities. The influence of secure attachment on well-being may be mediated by identity. Marcia (1988) proposed that secure attachment would promote the development of identity, as adolescents who are securely attached feel free to explore their environment, and return to their secure base to discuss their own experiences and attitudes within the family. Several studies have confirmed the positive association between quality of attachment and identity achievement (e.g., Benson, Harris & Rogers, 1992; Lapsely, Rice & Fitzgerald, 1990; Zimmermann & Becker-Stoll, 2002). Similarly, the few available studies on identity development and peer attachment reported a positive association between peer attachment and identity formation (e.g., Meeus, Oosterwegel, & Vollebergh, 2002).

Caring for children and adolescents with a disability is often demanding and challenging for the caregivers (Howe, 2006). This caregiving stress may result in parenting that is less sensitive to the child’s needs, and reduced parental emotional availability (Howe, 2006). These patterns of parenting behavior (less sensitive parenting and reduced emotional availability) may significantly contribute to insecure attachment among adolescents with a disability (De Wolff & Van Ijzendoorn, 1997; Out, Bakermans-Kranenburg, & Van Ijzendoorn, 2009). In a review of attachment literature among children who are deaf, Mckinnon, Moran and Pederson (2004) noted that factors such as communication challenges and placement in residential schools are likely to contribute to lower rates of secure attachment among children who are deaf by middle childhood. Similarly, Weisel and Kamara (2005) observed that not only did young adults who were deaf/hard of hearing express increased fear of attachment, this fear was associated with lower self-esteem and diminished well-being. It can be concluded that children with disabilities are at an elevated risk of experiencing insecure attachment.

Although the relationship between secure attachment, identity formation, and well-being is expected to hold for adolescents both with and without disability, we expect that the strength of the relationship between variables may vary. Firstly, adolescents with disabilities may become more strongly attached to their peers who are experiencing the same conditions. For instance, a study among Israeli adolescents with hearing impairments showed that many faced coping problems which hindered their identity formation and led to a negative self-concept (Israelite, Ower, & Goldstein, 2002). In addition, these adolescents indicated a strong preference for peers with hearing impairments, since they did not fit into peer groups of adolescents without hearing impairment — partly as a result of barriers in peer interaction due to communication problems. This implies that adolescents with disabilities will not only have higher scores in peer attachment compared those without, but also that the strength of the relationship between peer attachment and well-being in this group is expected to be stronger. Previous research points to the plausibility of this hypothesis. For instance, Kef and Dekovic (2004) observed that while peer and parental support proved to be as important for the well-being of adolescents with a visual impairment as for sighted adolescents, the role of peer support in enhancing well-being among visually impaired adolescents was much more pronounced.

The current study

The current study aims to evaluate the relationship between attachment to parents and peers, identity formation, and well-being among adolescents with visual and physical impairments in Kenya. We present a unique perspective in two ways. Firstly, the data come from an understudied region. Secondly, in our education setting, most adolescents with disabilities study in schools that cater exclusively for children with special needs; this educational setting is less common in Western settings where inclusive education is now the norm. The adolescents with disabilities in our study spend most of their time with other adolescents experiencing similar disabling conditions. As a consequence, peer relationships may play a more prominent role in their identity formation than is usually observed in Western settings. Based on the literature earlier reviewed, and the educational context of the adolescents, we set out to test the following hypotheses:

Hypothesis 1. Adolescents with a disabling condition have lower scores on life satisfaction, identity formation, and secure attachment, and higher scores on poor mental health in comparison to same-age peers.

Hypothesis 2. There are both direct and indirect positive relationships between the quality of parent and peer attachment and the psychological well-being of adolescents with or without a disability.

Hypothesis 3. The relationship between the quality of attachment, identity formation, and psychological well-being differs in the presence of a disabling condition. More specifically, among adolescents with disabilities, the quality of peer attachment is more salient.
Method

Sites and samples

The study was carried out in Nairobi and its vicinity. Following the granting of permission to conduct this study by the relevant authorities, students were approached in schools. Two schools were purposively sampled: one was selected because it caters mainly for adolescents with visual impairments, and the other for adolescents with physical impairments. Purposive sampling is necessitated by the fact that even though inclusive education is being implemented in Kenya, a significant number of adolescents with disabilities still attend special schools. An additional sample of controls (adolescents without a disability) was identified and recruited from two schools within the same district. All adolescents involved in this study were recruited from boarding schools. The questionnaires were administered to a total of 350 students. Due to missing data, 54 of the questionnaires were considered invalid. The current study has 296 students, of whom 151 were adolescents with a disability. Table 1 presents the sample characteristics. The samples did not differ in terms of gender distribution, but there were statistically significant differences in age and parental education. The adolescents with a disability were significantly older, and came from families where parents were significantly less educated.

Procedure

Data were collected in classes in a group format under the supervision of a research assistant. The questionnaires were administered to the adolescents with a disability in a manner that took into account their special needs. This was especially so for adolescents with visual impairments. They received the questionnaire either in bolder letters, in Braille, or via an assistant reading for them. All measures were administered in English. Prior to the main data collection, a pilot study involving 70 students (not included in this sample) was carried out. During the pilot study, both quantitative and qualitative approaches were used to evaluate the extent to which the measures being administered were appropriate. These included verbal feedback on any questions thought to be inappropriate or difficult. Consequently, measures were adjusted or excluded where appropriate. Moreover, before administering these measures in a new context, we confirmed their appropriateness for both the context and the age group.

Measures

Personal identity measure

This was assessed using a modified version of the identity subscale of the Erickson’s Psychosocial Stage Inventory (Gray, Ispa, & Thornburg, 1986). Prior to the administration of this scale, the measure was evaluated for linguistic clarity and the appropriateness of the items to the education level of the adolescents. A significant number of modifications were made to item wording, and many items were simplified. The items were scored on a five-point Likert scale ranging from 1 = not applicable to me to 5 = always applicable to me. Exploratory factor analysis indicated a strong single factor, with one item with poor loading. The item “I change my opinion about myself” was excluded because it had a low and negative loading on the scale. We retained a single factor which explained 25% of the variance, and had an eigenvalue of 3.64. These items showed an adequate internal consistency, with a value of Cronbach’s alpha of .70 for adolescents with disabilities and .76 for the comparison group.

Inventory of parent and peer attachment (IPPA)

A short 36-item version of the IPPA (Nada Raja, McGee & Stanton, 1992) was administered. The measure evaluates the perceived quality of maternal, paternal and peer attachment security, using 12 items for each of the subscales. Higher scores are an indication of higher perceived attachment security. While the original authors (Armsden & Greenberg, 1987) indicated that the long version of this measure has three subscales, recent findings indicate that a single-factor structure may adequately represent this measure (e.g., Gallarin & Alonso-Arboli, 2013; Günaydin, Selçuk, Sümer, & Uysal, 2005). In an analysis not further documented here, we found a single factor with all items loading more than .30 on this factor (and for the peer subscale two items loaded less than .30). The internal consistency for these measures for the parent subscale were above

<p>| Table 1 |</p>
<table>
<thead>
<tr>
<th>Sample descriptives.</th>
<th>With disabilities (n = 151)</th>
<th>Without disabilities (n = 145)</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (Female)*</td>
<td>70 (47%)</td>
<td>64 (44%)</td>
<td>.24</td>
<td>.63</td>
</tr>
<tr>
<td>Mean age (SD)</td>
<td>17.52 (1.56)</td>
<td>16.43 (1.75)</td>
<td>5.65</td>
<td>.001</td>
</tr>
<tr>
<td>Mean Maternal education (SD)</td>
<td>.81 (.61)</td>
<td>1.17 (.66)</td>
<td>-4.90</td>
<td>.001</td>
</tr>
<tr>
<td>Mean Paternal education (SD)</td>
<td>1.04 (.58)</td>
<td>1.38 (.59)</td>
<td>-4.95</td>
<td>.001</td>
</tr>
</tbody>
</table>

* These are chi-square statistics.
the acceptable level at .83, .82, and slightly lower for the peer subscale at .70 for adolescents with disabilities. The values in the comparison groups were .85, .82 and .69 for maternal, paternal and peer subscales respectively.

Psychological well-being

Two measures of well-being were administered. One measure evaluates positive well-being, while the other evaluates negative well-being. The Brief Multidimensional Students’ Life Satisfaction (BMSLS; Huebner, Seligson, Valois & Suldo, 2006) scale was applied as a measure of positive psychological well-being. The measure includes six items, five of them focusing on specific domains (family, friends, school, self, and living environment), and one item focusing on global well-being. A sample item includes “I would describe my satisfaction with my life as”; these items are scored on a seven-point Likert scale ranging from 1 (terrible) to 7 (delighted). The scale showed an adequate internal consistency with a value of Cronbach’s alpha of .75 for adolescents with disabilities and .72 for the comparison group. The General Health Questionnaire-12 was administered as a measure of poor mental health (Goldberg, 1972). This instrument was originally developed as a screening test for detecting minor psychiatric disturbance or strains. The measure assesses changes in affective and somatic symptoms relative to usual levels of health, such as feelings of strain, depression, inability to cope, anxiety-based insomnia, and lack of confidence (Mukkaley, Wall, Warr, Clegg & Stride, 1999). In the current study, a Likert scale scoring procedure of 0-1-2-3 was used for the GHQ-12. Higher scores indicate poorer mental health. These items showed an adequate internal consistency with a value of Cronbach’s alpha of .73 for adolescents with disabilities and .77 for comparison group.

Social demographics

We collected data on the students’ backgrounds, including age, gender, and parental education. Three levels of both maternal and paternal education were distinguished: primary level education and less (score: 0), secondary and high school (1), and post-secondary education (2).

Analysis strategy

The data analysis employed several statistical methods. Factor analysis and Cronbach’s alpha were employed to evaluate the psychometric properties of the questionnaires. A multivariate analysis of covariance (MANCOVA) was used to investigate the differences in group means (Hypothesis 1). The covariates included were age, gender, and parental education. The influence of age in this data set is considered at two levels. In the MANCOVA analysis, students are categorized as either early or late adolescents, based on age (cut-off of 16 years old). This categorized age variable is included in the MANCOVA as a predictor. A multigroup path analysis using AMOS 19 was used to evaluate the goodness of fit of the hypothesized model (Hypothesis 2), and its invariance across the two groups (Hypothesis 3). In the path analysis, we used age-corrected scores. A regression method to correct for age was applied, where standardized residuals are saved and used as scores for further analyses. Following suggestions from the literature (Hu & Bentler, 1999), we assessed the goodness of fit for each model using Chi-Square, the Tucker-Lewis Index (TLI), and the Comparative Fit Index (CFI). A non-significant chi-square and values greater than .95 for the TLI and CFI are considered to reflect acceptable model fit (Hu & Bentler, 1999). The Root Mean Square Error of Approximation (RMSEA) is also reported, since it has been shown to be sensitive to model misspecification: values of less than .08 are considered indicative of acceptable model fit (Hu & Bentler, 1999). To evaluate the level of equivalence between the two groups, we examined the change in goodness of fit indices from one model to the other whilst evaluating the Akaike Information Criterion (AIC). The recommendation is that the delta CFI should be less than .010, with the smallest AIC indicating the best model Milfont, & Fischer (2010).

Results

Differences between adolescents with and without disability

Table 2 presents means and effect sizes of scores on all variables under study for adolescents with and without disabilities. To evaluate the magnitude of the group differences that were specified in the first hypothesis, we carried out a Multivariate Analysis of Covariance, with maternal attachment, paternal attachment, peer attachment, identity, life satisfaction and poor mental health as dependent variables, disability status as an independent variable, and age, gender, and maternal and paternal education as covariates. Wilks’ lambda showed a significant main effect of maternal education (F(1, 281) = 2.47, p < .024, \( \eta^2 = .05 \)), gender (F(1, 281) = 2.42, p < .026, \( \eta^2 = .05 \)), disability (F(1, 281) = 7.74, p < .001, \( \eta^2 = .14 \)), and a disability with gender interaction (F(1, 281) = 3.81, p < .001, \( \eta^2 = .08 \)).

An inspection of the univariate results indicated a main effect of maternal education on maternal attachment; significantly lower scores were observed for adolescents whose mothers had the least education (M = 44.43, SD = 9.29) compared to those with the medium level of education (M = 46.99, SD = 9.16), and the highest scores for those whose mothers had the highest level of education (M = 48.94, SD = 8.87); F(1, 286) = 8.81, p < .003, \( \eta^2 = .03 \). Gender showed an effect on measures of positive and negative well-being. Females had significantly higher scores on poor mental health: F(1, 286) = 6.57, p < .011, \( \eta^2 = .02 \). On the measure of life satisfaction, female adolescents had significantly lower scores compared to male counterparts: F(1, 286) = 10.47, p < .001, \( \eta^2 = .04 \).
In the univariate analysis, disability showed an effect on identity formation, $F(1, 286) = 28.70, p < .001, \eta^2 = .09$. Adolescents with a disability had significantly lower scores on identity compared to their counterparts without. In addition, adolescents with a disability had significantly lower scores on the life satisfaction scale compared to their counterparts, $F(1, 286) = 6.99, p = .009, \eta^2 = .03$.

Moreover, a significant disability by gender interaction was observed for paternal attachment by gender interaction, $F(1, 286) = 26.14, p < .001, \eta^2 = .05$ (see Fig. 1a for the means in these groups). Similar effects on paternal attachments were observed on a disability-gender-age interaction, $F(1, 286) = 8.32, p < .001, \eta^2 = .03$ (see Fig. 1b for the means in these groups).

In conclusion, Hypothesis 1, regarding the differences between the adolescents with a disability compared to those without a disability, was confirmed. After controlling for the covariates (viz. age, gender, and maternal and paternal education), the group of adolescents with disabilities was observed to experience less life satisfaction, less secure attachment with fathers, and poorer identity formation.

### Multigroup path analysis on mediational effects

To evaluate the second and third hypotheses, we carried out a multigroup path analysis. Table 3 shows the fit statistics from the multigroup analysis for adolescents with or without a disability. The fit statistics indicated that the unconstrained model showed the best fit to the model. These results highlight two salient points. First, in confirmation of our second hypothesis, identity partially mediates the relationship between attachment and well-being; second, the pattern and structure of the relationship between the variables was identical for both groups, but the strength of (some of) the relationships differed significantly. The most notable difference involved the relationship between identity formation and psychological well-being between these two groups (see Fig. 2 for the results); more specifically, the relation was strong and positive in the group without disabilities, and was negative in the group with disabilities. Notable is the fact that peer attachment seemed to work in a similar manner for adolescents with and without a disability, thereby disconfirming our third hypothesis.

### Discussion

The current study aimed at investigating the relationship between attachment and identity development, and their influence on psychological well-being (mental health and life satisfaction) in adolescents with disabilities. Consistent with our hypothesis and earlier research, we observed that adolescents with disabilities have lower life satisfaction and poorer identity formation compared to matched peers, although not necessarily a poorer mental health.

Our hypothesis relating the ramifications of a disabling condition to the quality of attachment was partially confirmed. We observed that adolescents with disabilities had the same quality of attachment with mothers and peers, but their scores were

---

**Table 2**

Means (and standard deviations) on the psychological scales for adolescents with ($n = 151$) and without ($n = 145$) disabilities.

<table>
<thead>
<tr>
<th></th>
<th>With disabilities Mean (SD)$^a$</th>
<th>Without disabilities Mean (SD)</th>
<th>Cohen's $d^b$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal attachment</td>
<td>46.21 (9.20)</td>
<td>47.68 (9.14)</td>
<td>-.160</td>
</tr>
<tr>
<td>Paternal attachment</td>
<td>42.34 (9.71)</td>
<td>45.21 (9.13)</td>
<td>-.305</td>
</tr>
<tr>
<td>Peer attachment</td>
<td>41.42 (7.36)</td>
<td>42.48 (7.26)</td>
<td>-.145</td>
</tr>
<tr>
<td>Identity formation</td>
<td>40.36 (7.20)</td>
<td>46.00 (6.64)</td>
<td>-.814</td>
</tr>
<tr>
<td>Poor mental health</td>
<td>12.07 (6.09)</td>
<td>11.26 (5.77)</td>
<td>.137</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>28.51 (6.98)</td>
<td>31.39 (6.00)</td>
<td>-.443</td>
</tr>
</tbody>
</table>

$^a$ Unadjusted means.

$^b$ There are recommended standards for interpreting the Cohen d. According to these standards, a value .10 or less negligible, up to .20 it is small, up to .50 moderate, while above .80 it is a large effect.

---

*Fig. 1.* Interaction effects between paternal attachment, gender and disability.
significantly lower for father attachment. Contrary to our hypothesis, adolescents with disabilities did not show a higher peer attachment score compared to their controls. These results may arise from the fact that adolescents both with and without disabilities live in boarding schools, share the same challenges of growing up in a setting apart from parents’ home (hence, develop the same level of bonding), and are likely to provide each other with emotional and social support in that setting.

An important question arising from these results is why paternal attachment is lower for adolescents with disabilities. Poor quality paternal attachment may arise from paternal non-involvement with the adolescents with disabilities. The literature focusing on young children indicates that there is a significant and positive relationship between paternal involvement in the child’s caretaking and the quality of father–child attachment (Newland, Coyl, & Freeman, 2008). Moreover, differences in the quality of attachment may arise from the stress level, coping strategies and patterns of father–child (adolescents) interactions. Empirical evidence, largely derived from Western countries, indicates that there are significant gender differences in the way parents react to their child’s disability. Fathers in these countries have been observed to use more avoidant coping as a way of dealing with any of the stress related to raising adolescents with disabilities (Hornby, 1996; Krauss, 1993; Sullivan, 2002). It is difficult to find a study on how fathers in the African context interact with their adolescents who have a disability. Given the large difference in the patterning of gender roles in Western and African countries, coupled

Table 3
Invariance models and goodness-of-fit indexes of the multigroup analysis.

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$ (df)</th>
<th>$\Delta \chi^2$ (df)</th>
<th>$\chi^2$/df</th>
<th>RMSEA</th>
<th>TLI</th>
<th>CFI</th>
<th>$\Delta$CFI</th>
<th>AIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unconstrained model</td>
<td>14.32 (12)</td>
<td>-</td>
<td>1.194</td>
<td>.026</td>
<td>.93</td>
<td>.99</td>
<td>-</td>
<td>98.32</td>
</tr>
<tr>
<td>Measurement weights</td>
<td>26.06 (16)</td>
<td>-</td>
<td>12.64 (2)</td>
<td>.046</td>
<td>.93</td>
<td>.97</td>
<td>.02</td>
<td>102.07</td>
</tr>
<tr>
<td>Measurement intercepts</td>
<td>77.61 (22)***</td>
<td>.5155 (6)</td>
<td>3.527</td>
<td>.093</td>
<td>.75</td>
<td>.87</td>
<td>.10</td>
<td>141.60</td>
</tr>
<tr>
<td>Structural weights</td>
<td>83.45 (24)***</td>
<td>5.84 (2)</td>
<td>3.477</td>
<td>.092</td>
<td>.75</td>
<td>.86</td>
<td>.01</td>
<td>143.45</td>
</tr>
<tr>
<td>Structural covariances</td>
<td>84.17 (25)**</td>
<td>.72 (1)</td>
<td>3.367</td>
<td>.090</td>
<td>.76</td>
<td>.86</td>
<td>.00</td>
<td>142.61</td>
</tr>
<tr>
<td>Structural residuals</td>
<td>86.61 (26)**</td>
<td>2.44 (1)</td>
<td>3.331</td>
<td>.089</td>
<td>.77</td>
<td>.85</td>
<td>.01</td>
<td>162.30</td>
</tr>
</tbody>
</table>

Note. The model with a good fit in italics. *$p < .05$, **$p < .01$, ***$p < .001$, $p < .053$.

Fig. 2. The standardized coefficients from the multigroup mediational model on the relationship between secure attachment, identity formation, and psychological well-being. Note. All coefficients are statistically significant except for the path from identity formation to well-being in adolescents with disability. ns insignificant path coefficient. Italicized coefficient presents those of adolescents without disabilities.
with the differences in the perceptions of the paternal roles, results from Western fathers may not be easily extrapolated to the African context (Nsamenang, 2010). There is, therefore, an urgent need to study African fathers - especially those with adolescents with a disability - with a view to understanding, and possibly improving, the relationships between fathers and their adolescent children with a disability.

Results from both correlational analysis and path analysis emphasize the saliency of both parent and peer attachment. While the significance of secure parental attachment has long been acknowledged, there is still controversy on the role of peer attachment. Our results indicate that both parent and peer attachment appear to be relevant in the well-being of adolescents, which is consistent with findings earlier reported (Brumariu & Kerns, 2010). Our results provide further support to the argument proffered by Nelis and Rae (2009) that peer relationship is salient, and serves a significantly different function from parental attachments. Moreover, although the saliency of secure attachment to identity formation has been proposed for some time (Marcia, 1988), few empirical studies have directly tested this hypothesis, especially in the African context. We present one of the earliest empirical tests, and confirmation of this hypothesis in the African context.

Identity development was the most affected variable among adolescents with disabilities, where a large effect was observed. This is consistent with what has been observed elsewhere among adolescents with various forms of disabilities. The problems of identity development have been observed to have early roots and various antecedents. Adolescents with disabilities have been observed to experience low self-concept and self-esteem (Heyman, 1990; King, Shultz, Steel Gilpin & Cathers, 1993; Miyahara & Piek, 2006). It seems that for adolescents with a disability, the process of identity formation (which involves explorations, questioning and making commitments about the future) may lead to an elevated level of anxiety, hence negative well-being. Therefore, programs that target the fostering of a more positive identity in this population are urgently needed. Given the impact of a coherent sense of identity on current and future adjustment, the need to address this problem among adolescents with a disability should be a priority for educationalists and guidance and counseling services in their school contexts.

Our pattern of results indicates that both parent and peer attachment play an important role in the identity formation and psychological well-being of adolescents in Kenya, irrespective of a disabling condition. Taken together, the findings from this study emphasize the salience of secure attachment and the quality of relationship to significant others in shaping the psychological well-being and functioning of Kenyan adolescents. These findings are consistent with other findings from various parts of the world (Brumariu & Kerns, 2010; Cassidy & Shaver, 1999).

Significant gender effects on psychological well-being were observed. Females were observed to experience significantly lower life satisfaction and poorer mental health. These results are consistent with what has been reported elsewhere, which indicates that gender is a risk factor for mental health problems, such as depression and anxiety (Birmaher et al., 1996; Botticello, 2009). What is of special interest here is that this gender difference is still salient in a population characterized by lower levels of well-being. Given the adverse effects of mental health problems on educational achievement and future productivity, there is a need for increased intervention efforts to focus on enhancing the psychological well-being of (notably female) adolescents in Kenya.

An important conceptual issue is the evaluation of both positive and negative well-being. The concurrent study of life satisfaction and poor mental health allows us to evaluate not only the absence of mild psychiatry symptoms, but also the presence of positive well-being. While the use of this approach is advocated in the literature (Huppert & Whittington, 2003), few studies take this approach. The pattern of relationships between the various variables and measures of well-being support the stand that, in studying psychological well-being, there is a clear need to assess both aspects of well-being in order to fully understand the influence of certain variables. For instance, we observed that the absence of mild psychiatry symptoms as assessed by GHQ did not imply that the adolescents were in good mental condition, since they also had low scores on life satisfaction. Therefore, merely assessing poor mental health would have missed the lack of positive well-being, or vice versa.

The current study is an important step in understanding the pathways to poor outcomes among adolescents with disabilities in a novel context. However, the study has several limitations which may impact on the generalizability of the findings. Firstly, data were based on self-reports, which may be influenced by self-representation biases. Future studies may want to use other multimethod and multi-informant approaches. Secondly, in this study we were interested in the pattern of relationships between various variables of interest. The sample sizes in our disability groups were too small to allow for the evaluation of full-fledged path analytic models that separated the visually impaired from those with physical impairments. We may have missed subtle differences of disability types. Future efforts involving larger samples would look at evaluating these patterns. Thirdly, the study used a cross-sectional design; this study design does not allow for the evaluation of developmental trajectories in these important relationships. Future efforts will attempt to take into consideration school level influences in order to try and provide a more comprehensive evaluation of contextual predictors of well-being among adolescents.

Practical implications

Guidance and counseling services are widely available in Kenyan schools, yet there is almost no research evidence to guide the interventions necessary to accommodate the needs of Kenyan adolescents. The current study presents salient information in this regard. Specifically, our findings highlight that a) the provision of counseling and social support services to enhance the quality of attachment to peers and family members among Kenyan adolescents is likely to contribute to positive adjustment, and b) services aimed at assisting adolescents with disabilities to deal with the uncertainty of identity formation are urgently needed, since identity formation seems to be an especially challenging task for adolescents with a disabling condition.
In conclusion, our results represent a step forward in the investigation of pathways to poor psychological outcomes among adolescents in Kenya and other similar settings. Moreover, they provide salient information for guidance in the development of targeted programmes and interventions aimed at enhancing the quality of life among adolescents.

Acknowledgments

This research study was supported by funding from Tilburg University to the first author. The authors would like to thank Asya Ali, Abubakar Omar, Newton Mukolwe, Christine Murugami, and Elma Nzai for their help collecting data, and Khamis Katana for data entry.

References


