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Psychometric Properties of Multidimensional Scale of Perceived Social Support among Ghanaian Adolescents

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Abstract Despite the documented number of scales in international literature measuring perceived social support, none of these have been validated in the Ghanaian context. In this paper, we investigated psychometric properties of the Multidimensional Scale of Perceived Social Support (MSPSS) in school-going adolescents in the Northern region of Ghana. In determining the factorial validity, a confirmatory factor analysis yielded a 3-factor structure (Family, Friends and Significant Others) in two independent samples, corresponding to the original factor structure of the MSPSS. The MSPSS demonstrated good internal consistency and correlated negatively with depression. Moreover, support for convergent validity was determined by evaluating the correlation between perceived family and friends support and satisfaction with family and friends measure. Similarly, univariate testing indicated that there were significant gender differences for the subscales of both family and friends, with males showing higher perceptions of support in these two domains. The findings on the psychometric properties of the MSPSS indicates that this instrument is valid tool for measuring perceptions of support in the Ghanaian context.

Keywords Multidimensional scale of perceived social support · Psychometric properties · Adolescents · Ghana

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1 Introduction

Social relationships are an important aspect of adolescents' lives, and research evidence points to the impact of support from family, friends and significant others on the adolescent's psychological well-being. (Klineberg et al. 2006; Malecki and Demaray 2003; Rueger et al. 2010; Ystgaard 1997). In addition, the pervasive nature of social support in individuals' lives has spurred research on the relationship between support and coping (Cheng et al. 2014; Cohen and Wills 1985; Dour et al. 2014; Wethington and Kessler 1986), mental health (Hefner and Eisenberg 2009; Kessler and McLeod 1985; Stewart and Suldo 2011) and physical health (Thoits 2011). Within adolescent research, social support has been found to reduce both the effects of bullying on psychological health (Owusu et al. 2011; Rigby 2000) and the propensity for engaging in suicidal behaviours (Gallagher et al. 2014; Rigby and Slee 1999). The growing need to validate social support measures across different cultures has provided the impetus for this study.

The multidimensional nature of social support is reflected in the different sources from whom individuals solicit support in times of distress. Support has been found to emerge from family, friends and significant others who all form part of the social network of an individual (Siddall et al. 2013; Tardy 1985). Distinctions have also been made between perceived social support, on the one hand, and actual or received support, on the other hand (Barrera 1986; Cohen and Wills 1985; Wethington and Kessler 1986), with cumulative research findings pointing to the relative importance of perceived social support in promoting well-being. Gender differences have also been found in the perception of social support (Cheng and Chan 2004; Grav et al. 2013; Rigby and Slee 1999), with girls reporting relatively higher perceptions of social support from significant others (Rigby and Slee 1999; Rueger et al. 2010). Moreover, research on perceived social support has found the evaluation of support to be a better predictor of psychological well-being compared to received support (Wethington and Kessler 1986). The Multidimensional Scale of Perceived Social Support (Zimet et al. 1988), one of the measures of perceived social support that has become influential in the assessment of perceived social support, has been validated in South Africa (Bruwer et al. 2008), China (Chou 2000), South Asia (Tonsing et al. 2012), and Thailand (Wongpakaran et al. 2011). This scale was chosen for study within the Ghanaian context because it provides concise measurement items on three major sources of social support (family, friends and significant others). Research assessing the psychometric properties of MSPSS in South Africa have yielded a three-factor structure (Bruwer et al. 2008; Canty-Mitchel and Zimet 2000), while a study in China produced a two-factor structure (Chou 2000). A single-factor structure was determined in a study in Pakistan (Akhtar et al. 2010), but there have been no studies in the Ghanaian context providing information on the scale's psychometric properties.

The inconsistencies in the factor structure of the MSPSS are worth highlighting. It is possible that the single- and two-factor structures found in collectivist cultures (for example, Akhtar et al. 2010; Chou 2000) were due to the closely-knit nature of social relations in these societies that make the differentiation of support sources dissimilar to those found in individualistic cultures. Moreover, these factor structures have been found to be peculiar to communal societies where support is drawn from extended families who, given the prevailing socially sanctioned and familial defined avenues of

support seeking in these settings, are also regarded as friends or significant others. In contrast, for individuals in more individualistic Western cultures, it is likely that the nature of these societies (notably, the value system that encourages a duteous dissection of how distant or close the relationship the individual has with different providers of support), readily allowed clear differentiation between different support sources, as evident in Zimet et al. (1988).

It is also possible that the need to translate the MSPSS to the local language of the context study (Akhtar et al. 2010) often results in the blurring of the different support sources. For example, the 'significant others' and 'friends' might be indistinguishable in contexts where the language spoken uses these two concepts interchangeably to refer to sources of support found outside the family. Should this be the case, it stands to reason that a support provider coming from outside the family would, in these contexts, be seen as *significant* enough to be deemed a 'friend'. Similarly, a friend (because of the value of support they presumably give) would be seen as a significant other, thus making the contours that separate the two largely, if not completely, blurred. Taken together, these inconsistencies in the factor structure could imply that people in different cultures might perceive their sources of support either broadly or narrowly, depending on how varied their social networks appear to be and it might be challenging to impose a fixed structure on the probable sources of support. This also implies that the external validity of the current factor structure of the MSPSS might need to be tested prior to its application as a tool for assessing different sources of support in different contexts.

Social support is embedded in the daily life of Ghanaians and individuals depend heavily on their networks for support in times of difficulties and stress (Gyekye 1997). Research on well-being in the Ghanaian context has pointed to social support and perceptions of it as important factors for well-being (Addai and Adjei 2013; Amoah and Jørgensen 2014; Glozah and Pevalin 2014). However, there is lack of a standardised instrument for measuring perceived social support within the Ghanaian context. Validation of the MSPSS is particularly important in the Ghanaian context because of the closely knit nature of this society and its emphasis on the family ties (Nukunya 2003) with the probable resultant effect being a lack of a clear distinction between family, friends and significant others. Moreover, van der Geest (2013) found that in the Kwahu region of Ghana, individuals who could be regarded as 'significant others' (close friends) are usually referred to as siblings, implying that individuals who are not 'so close' would simply be regarded as friends, with 'significant others' becoming quite difficult to identify. It would therefore seem that the original three-factor structure might differ for the Ghanaian context. Despite the collectivist nature of the Ghanaian society, we sought to test the hypothesised original three-factor structure because of the evidence from a South African study (e.g., Bruwer et al. 2008) – a context that could also be regarded as having features of a communal society – regarding the validity of this factor structure for this African setting. We tested the three-factor structure because previous research has noted that the three-factor among adolescents, specifically the 'significant others' component, would provide a supplement to family and friends to include boyfriends or girlfriends and teachers (Canty-Mitchel and Zimet 2000). In testing this factor structure, we sought to determine if adolescents would clearly differentiate their sources of support, given the closely-knit nature of the

Ghanaian society. Such information is necessary to determine whether the argument for the existence of single- and two-factor structures in collectivist societies is a valid plausible explanation for these previous findings.

Given that there is no prior study differentiating these sources of support, we hope that our study would provide information on the cross-cultural factorial validity of the scale for the Ghanaian context. Against this background, this paper sought to provide the psychometric properties of the MSPSS in school-going adolescents in the Northern region of Ghana. We sought to determine the external validity of the MSPSS and also to provide suggestions to increase its usefulness as a valid instrument for measuring perceived social support in the Ghanaian context.

2 Methodology

2.1 Participants

A modified version of the multi-stage cluster sampling technique was used in randomly selecting participants in the Northern region of Ghana to be part of the study. Schools were selected through both random and convenience sampling across the local government divisions (LGDs) of the Northern region of Ghana, these comprised the metropolitan, municipal and the district divisions. As a result of limited access to and availability of schools for research, two schools (out of a total of nine) were conveniently selected from the population of schools in the metropolitan division. A single school was conveniently selected from the municipal division and a total of four schools (out of a total of 23) were randomly selected from the population of schools in the district division. The schools selected from each division were representative of schools in the Northern region of Ghana. It is worth mentioning that three schools from the metropolitan division were contacted but only two schools responded positively resulting in a convenience sampling from this division. In addition, there were only two public schools in the municipality division resulting in the purposive sampling of the first school that provided a positive response. In total, nine schools were contacted but seven consented to partaking in the study. A total of 717 adolescents from the 7 schools in the Northern region of Ghana participated in the study. We chose to study school-going adolescents because social support at the stage of adolescence is critical for their well-being, yet no notable study in the Ghanaian context could be traced, which explored the validity of a measure of social support. Moreover, given the qualities of the MSPSS (concise, diverse sources of support and established strong psychometric properties in other contexts), to us, the MSPSS became an ideal measure of social support, hence the need for its validation in the Ghanaian context. Of the 717 participants, 429 (60 %) were male, and 286 (40 %) were female, with missing data from two participants. The sample comprised 360 participants (50.2 %) from Grade 11, and 357 (49.8 %) from Grade 12 (with both grades representing senior high schools in Ghana). Senior high schools in Ghana generally comprise Grades 10, 11 and 12. However, at the time of data collection (October 2013), the Grade 10 adolescents were yet to be admitted into the schools selected for the study, thus rendering the inclusion of this grade in the study not feasible, given the time constraints. A total of 498

participants (69.6 %) were above the age of 18, with 210 (29.3 %) being between the ages of 16 and 18 years. Eight participants (1.1 %) were below 15 years.

2.2 Procedure

The data gathered from school-going adolescents in the Northern region formed part of a larger mixed-methods study investigating the relationships between hope, perceived social support, life satisfaction and mental health, and this was conducted between October 2013 and February 2014. The questionnaires were distributed to participants after consent had been obtained from participants above 18 years. Consent was also obtained from parents and legal guardians on behalf of participants who were below 18 years. Additional assent forms were issued to participants below 18 years in order to obtain their consent to partake in the study. The completion of the questionnaires, which were self-administered, took approximately 60 minutes and the MSPSS was completed in approximately 10 minutes.

2.3 Measuring Instruments

Perceived social support was measured using the *Multidimensional Scale of Perceived Social Support* (MSPSS; Zimet et al. 1988). The MSPSS consists of 12 items designed to measure the participants' perception of the availability of social support (Zimet et al. 1988). The participants rated each item on a 7 point scale ranging from 1 to 7, with higher scores indicating higher perception of social support. The MSPSS has a reliability score (Cronbach's alpha coefficient) of .88. The test retest reliability for MSPSS was .85, indicating a good internal reliability and stability over time. Construct validity was determined by showing its correlation with depression. Each of the subscales (Family, Friends and Significant Others) were significantly inversely related with depression as was the whole scale ($r=-.25$) (Zimet et al. 1988). In the study among school-going adolescents in the Northern region, we had a Cronbach alpha of .81 for the global scale of the MSPSS and .73, .61 and .74 for family, friends and significant others subscales, respectively.

Mental health was measured using the *Mental Health Inventory-38* (MHI 38; Veit and Ware 1983). MHI-38 consists of 38 items designed to assess the participants' level of psychological distress and well-being (Veit and Ware 1983). This scale was used only among the participants from the Northern region. The participants rated each item on a 6 point scale with the exception of items 9 and 28. These two items were scored on five-point scale (1–5). The MHI-38 assesses several aspects of mental health including anxiety, depression, behavioural control, emotional ties and positive affect, and life satisfaction and has a Cronbach alpha coefficient of .93 (Veit and Ware 1983). These subscales were subsumed into two global scales – psychological well-being and psychological distress. These two global scales were established alternative standard scoring for the MHI-38. Two of the subscales (anxiety and depression) measuring psychological distress were used to determine whether MSPSS had adequate construct validity. In this study, we obtained a Cronbach alpha of .72 and .74 for psychological well-being and psychological distress global scales, respectively.

To measure participants' assessment of their individual levels of life satisfaction, the *Multidimensional Student Life Satisfaction Scale* (MSLSS; Huebner 1994) was used. This scale was designed to provide a multidimensional profile on children's judgments of life satisfaction. This scale was used only among the participants from the Northern region. This is a 40-item scale that has been used to tap the global evaluation of an individual's life (Heubner 1994; Pavot et al. 1991). The scale provides information on important domains for children's life satisfaction such as school, family, friends, living environment and self (Huebner 1994), and can be used across a wide range of ages including grades 3–12.

The response options range from 1 (never) to 4 (almost always). Negatively-keyed items were reverse scored. Higher scores thus indicate higher levels of life satisfaction throughout the scale. The reliability co-efficient for the MSLSS ranged from .70 to .90 (Gilman and Huebner 2006; Gilman et al. 2000; Huebner 1994). Convergent and discriminant validity have been demonstrated through correlations with other self-report well-being indexes (Gilman and Huebner 1997; Huebner 1994). The MSLSS in the present adolescent sample from the Northern region had a Cronbach's alpha internal consistency of .69. For the purpose of determining convergent validity, the satisfaction with family and friends subscales were used.

2.4 Ethics Approval

The research ethics committee for human research at the University of Stellenbosch granted ethics clearance for the study to be conducted. We obtained institutional permission from the Northern region of the Ghana Education Service and from the respective administrations of the schools that participated in the study. Anonymity was ensured by excluding identifiable characteristics, such as participant names, from the data that was gathered. Confidentiality was ensured by keeping the data within a restricted access in a way that only the principal researcher and authorised individuals could access it. The funders of this study had no involvement in the collection, analysis, interpretation, writing of the reports and decision to submit this article for publication.

2.5 Data Analyses

The psychometric analysis of MSPSS commenced with an item analysis, which included a test for normality with skewness and kurtosis levels set at 2 and 7, respectively (West et al. 1995). Inter-item correlations were determined using the Pearson's product–moment correlation, with significant levels of .05, .01, and .001. Before testing the validity of the factorial structure, we randomly divided the sample into two independent groups: Subgroup 1 (359 participants) and Subgroup 2 (358 participants), using Statistica 12.0. We tested the three-factor structure using confirmatory factor analysis (CFA), and the method of robust maximum likelihood (MLR) estimator in Mplus (Muthén and Muthén 1998–2006) on the first subgroup. This was followed by an exploratory factor analysis (EFA) on the second subgroup. The rest of the analyses were carried out with the total sample of 717 participants. Construct validity was determined by correlating all the subscales of MSPSS with depression and anxiety as well as the global scale of psychological distress using SPSS version 21.0. To provide support for convergent validity, perceived family and friends support

scores on MSPSS were correlated with the family and friends subscale of MSLSS. All the subscales of MSPSS were also correlated with the global scale of psychological well-being.

Tests of internal consistency, specifically, the Cronbach's alpha coefficient with a 95 % confidence interval (Cronbach 1951) was used to determine the scale's reliability. Multivariate Analysis of Variance (MANOVA) was used to test gender differences in mean levels of support from family, friends and significant others. The three sources of support on MSPSS were entered as dependent variables and gender as the independent variable. The hypothesised three-factor structure measurement model was tested for both males and females in order to establish metric invariance across gender. This was done by comparing a baseline model with a restricted model in which the factor loadings of both reference and comparison groups were constrained as equal. Again, for the restrictive model (metric invariance), the intercepts in the comparison group were allowed to be freely estimated with the equality constraints of the means fixed at zero for both groups.

3 Results

3.1 Descriptive Statistics and Correlations

Table 1 shows the means, standard deviations and intercorrelations for each item on the scale. Regarding the inter-item correlation, strong-to-moderate correlations, at significant levels of $p < .05$, $p < .01$ and $p < .001$,were found among the individual items of the MSPSS, with the exception of items 4 and 12 that had insignificant correlations (See Table 1). The item-total correlations were between .47 and .29, with most items indicating very good discrimination, which usually includes scores above .39. Item 12 was the lowest in respect of the total inter-item correlation, with a score of .29. The total inter-item correlations met the traditional guidelines (Trochim 2000). These item-total correlations were similar to the inter-item correlations reported.

3.2 Factor Analysis and Reliability

We performed confirmatory factor analysis using Mplus (Muthén and Muthén 1998–2006) to validate the three-factor structure of MSPSS on the subgroup 1. Three factors were confirmed with the robust maximum likelihood estimation, and these factors corresponded to the dimensions presented on the scale by Zimet et al. (1988). The model fit indices for the subgroup 1 were as follows: χ^2 (51) 78.25, $p < .001$, $\chi^2/df = 1.53$; Comparative Fit Index (CFI) = .959; Root Mean Square Error of Approximation (RMSEA) = .040 [90 % CI: .021, .057]; Standardised Root Mean Square Residual (SRMR) = .046. Using Hu and Bentler's (1999) criterion of < .80 for RMSEA and SRMR, the hypothesised three-factor structure could be said to have an acceptable fit. Moreover, the ratio of chi-square to the degrees of freedom met Kline's (2005) criterion for acceptable model fit. The exploratory factory analysis (EFA) that was run on the subgroup 2 demonstrated a similar factor structure. For the subgroup 2, the factor structure that emerged accounted for 58.35 % of the variance, and was in the order of significant others, family and friends. There were also strong inter-factor

Table 1 Summary of Means, Standard Deviations and Intercorrelations for items on MSPSS

Items	Mean (SD)	1	2	3	4	5	6	7	8	9	10	11	12
MSPSS 1	4.95 (2.0)	1											
MSPSS 2	5.05 (1.86)	.54***	1										
MSPSS 3	5.87 (1.51)	.31***	.33***	1									
MSPSS 4	5.22 (1.73)	.30***	.36***	.49***	1								
MSPSS 5	5.06 (1.78)	.44***	.45***	.26***	.35***	1							
MSPSS 6	4.93 (1.51)	.22***	.21***	.29***	.25***	.24***	1						
MSPSS 7	4.50 (1.87)	.12**	.17***	.14***	.14***	.17***	.30***	1					
MSPSS 8	5.34 (1.87)	.24***	.23***	.29***	.39***	.23***	.17***	.20***	1				
MSPSS 9	5.11 (1.69)	.14***	.29***	.21***	.17***	.26***	.29***	.27***	.24***	1			
MSPSS 10	5.23 (1.90)	.28***	.36***	.31***	.26***	.40***	.17***	.19***	.19***	.34***	1		
MSPSS 11	5.58 (1.64)	.26***	.29***	.51***	.46***	.32***	.25***	.20***	.33***	.23***	.34***	1	
MSPSS 12	4.99 (1.72)	.10***	.16***	.12**	.07	.10*	.24***	.30***	.18***	.31***	.11**	.17***	1

MSPSS Multidimensional Scale of Perceived Social Support

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

correlations between the three factors that emerged and factor loadings were moderately high on their respective dimensions (see Table 3), with the exception of item 10 that loaded marginally stronger on the friends subscale instead of significant others. To assess the internal reliability, Cronbach's coefficient alphas were calculated for the global scale (.81) and the subscales: Family (.73), Friends (.61) and Significant Others (.74). Given that the Friends subscale had a reliability score of only .61, the internal consistency of this subscale was not fully confirmed in the present study. We also determined the metric invariance, which indicated that the hypothesised measurement model of the MSPSS was similar across gender (see Tables 2 and 3 for factor loadings of both groups).

3.3 Construct Validity

One of the hypotheses that informed the development of this instrument was that it would be negatively correlated with depression and anxiety and this has been confirmed in previous studies (Akhtar et al. 2010; Bruwer et al. 2008; Zimet et al. 1988). Support for this finding has been partly confirmed with 'family' and 'friends' subscales of perceived social support having significant negative correlations with depression subscale of the Mental Health Inventory-38 (see Table 4). However, there was no significant negative correlation between anxiety and any of the subscales of perceived social support. There were also significant correlations between significant others- ($r = -.09$, $p < .05$), family- ($r = -.13$, $p < .01$), friends ($r = .11$, $p < .01$) and the global scale of psychological distress. As expected, perceived family and friends support were significantly positively correlated with

Table 2 Factor Structure for Subgroup 1 for MSPSS

	FAM	FRI	SO
MSPSS Family			
3. My family really tries to help me	.73		
4. I get the emotional help & support I need from my family.	.68		
8. I can talk about my problems with my family	.47		
11. My family is willing to help me make decisions	.70		
MSPSS Friends			
6. My friends really try to help me		.63	
7. I can count on my friends when things go wrong		.47	
9. I have friends with whom I can share my joys and sorrows		.60	
12. I can talk about my problems with my friends		.43	
MSPSS Significant Other			
1. There is a special person who is around when I am in need			.62
2. There is a special person with whom I can share joys and sorrows			.71
5. I have a special person who is a real source of comfort to me			.64
10. There is a special person in my life who cares about my feelings			.55

MSPSS Multidimensional Scale of Perceived Social Support, *FAM* Family, *FRI* Friends, *SO* = Significant Other

Table 3 Exploratory Factor Analysis of the Subgroup 2 for MSPSS

Items	Factor Loadings		
	Family	Friends	Significant Others
3. My family really tries to help me	.57		
4. I get the emotional help & support I need from my family.	.79		
8. I can talk about my problems with my family	.59		
11. My family is willing to help me make decisions	.56		
6. My friends really try to help me		.35	
7. I can count on my friends when things go wrong		.53	
9. I have friends with whom I can share my joys and sorrows		.68	
12. I can talk about my problems with my friends		.43	
1. There is a special person who is around when I am in need			.75
2. There is a special person with whom I can share joys and sorrows			.82
5. I have a special person who is a real source of comfort to me			.48
10. There is a special person in my life who cares about my feelings		.31	

satisfaction with family ($r = .26$, $p < .001$) and friends ($r = .35$, $p < .001$), respectively, providing support for the convergent validity of the MSPSS. Additional evidence for convergent validity is provided in the significant correlations between perceived support from significant others- ($r = .26$, $p < .001$), family- ($r = .30$, $p < .001$), friends ($r = .18$, $p < .001$) and the global scale of psychological well-being.

Furthermore, the MANOVA showed that there was no main effect of gender, Wilks' lambda = .990, $F = 2.30$, $p > .05$, $\eta = .01$ on perceived social support. However, univariate testing indicated that there were significant gender differences for the subscale of family F (1, 711) = 4.12, $p < .05$, and the friends subscale F (1, 711) = 4.53, $p < .05$ for males. This implied that, compared to females, males had stronger perceptions of support from their family and friends.

Table 4 Correlations between MSPSS Subscales, Anxiety and Depression

	Significant Others	Family	Friends	Anxiety	Depression
MSPSS Significant others	1				
MSPSS Family	.50***	1			
MSPSS Friends	.35***	.37***	1		
MHI-Anxiety	.00	–.04	–.05	1	
MHI-Depression	–.04	–.08*	–.10**	.48***	1

MSPSS Multidimensional Scale of Perceived Social Support, *MH1-DEP* Mental Health Inventory-Depression, Mental Health Inventory-Anxiety

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

4 Discussion

In this paper, we sought to investigate the psychometric properties of the Multidimensional Scale of Perceived Social Support and provide further external validation of this instrument for the Ghanaian context. Data from school-going adolescents in the Northern region of Ghana was used. In general, the MSPSS was found to have sound psychometric properties for this sample of school-going adolescents. However, the low reliability obtained for the Friends subscale raises the need for further inquiry into the internal consistency of items measuring perceived support from friends.

Data emerging from the two independent subgroups that were created randomly from the larger data showed support for the three-factor structure, and this finding was in agreement with findings from the study of Bruwer et al. (2008) and the original factor structure (Zimet et al. 1988). Additionally, metric invariance was established across gender for this group of adolescents. This finding indicates that school-going adolescents in the Ghanaian context might actually be able to clearly distinguish between different support sources. This might be due to the fact that adolescents are at a stage where they are forming new relationships for different purposes (Crockett and Petersen 1993; Newman and Newman 1995). For example, peers at school, which would fall under the friends category might be useful for school assignments, while trustworthy adults, including their teachers may be clearly labelled as a significant other. Our findings therefore suggest that, although Ghana is communal society and closely-knit, the scale appears to have 3 components representing significant others, family, and friends. Moreover, our findings seem to contradict van der Geest's (2013) argument on the diffusion of close friends and family members. It is possible that the 'significant other' subscale provided a supplement for support networks that could not be clearly classified as 'family and friends'. A strength of the current study that is worth highlighting is the confirmation of the three-factor structure across two independent samples when both CFA and EFA were used.

We also found significant negative correlations between perceived social support from family and friends and the depression subscale of the Mental Health Inventory-38. The present finding was in line with previous studies indicating an inverse relationship between perceived social support and depression (Rueger et al. 2010; Zimet et al. 1988). This finding implies that clearly distinguishable support from friends and family was associated with lower scores on the mental health measures. Of interest to note is that all the subscales of MSPSS were significantly negatively correlated with the global scale of psychological distress, which comprised depression, anxiety and loss of behavioural control. To our knowledge, there is no previous finding comparing the subscales of the MSPSS with a global construct of psychological distress. The observed relationship between depression and social support could be underscored in the fact that the perceived presence of support from family and friends served as a buffer against stressful experiences, which could have resulted in negative emotions. This finding is particularly useful in the current context where most adolescents had limited access to the basic necessities of life. It would seem that in this sample of Ghanaian adolescents, MSPSS demonstrated good construct validity when it was correlated with multiple indicators of psychological distress. However, given the lack of relationship between anxiety and all the subscales, further research in this context is required to establish conclusive evidence on the relationship between these constructs. Given that perceived

family and friends support subscales were significantly correlated with the satisfaction with family and friends subscales of MSLSS among the adolescent sample, it could be concluded that MSPSS has sound convergent validity among this sample. The findings of the present sample suggest that MSPSS is a valid tool for assessing perceptions of support among varied populations in Ghana.

Multivariate analysis of variance showed that there was no main effect for gender for the present Ghanaian sample. However, the univariate descriptive statistic showed that males and females differed on their perceptions of the available support from family and friends, with males having stronger perceptions of support from their family and friends. Studies investigating gender differences in perceived social support have been inconsistent, with some indicating that stronger perceptions of social support is generally found in females (Rigby and Slee 1999; Rueger et al. 2010; Zimet et al. 1988), while others argue that there are no gender differences in the appraisal of social support (Edwards 2004; Tonsing et al. 2012). The observed gender differences could be explained by research evidence from the Northern region of Ghana, which has demonstrated how socio-cultural norms affect perceptions of support across gender. For example, Buchannan (2014) found that males had greater levels of school-related support compared to females. This was because the education of females was regarded as less beneficial in the long run compared to males. Females were generally regarded as belonging to their husbands' households and therefore not worthy of much investment. It is also plausible that in patriarchal societies like that of the Northern region of Ghana, male children and adolescents generally received preferential treatment from their families (as they were regarded as bearers of their families' legacies, and hence more 'dependable' than their female counterparts). Given this hierarchical order, which is determined along the male lines, stronger perceptions of support could have been a reflection of the general responsiveness on the part of families and friends towards male children.

Despite the valuable contributions of the present study, there were three major limitations. Firstly, due to the cross-sectional nature of the study, it was impossible to draw conclusions regarding cause and effect in respect of the relationship between perceived social support, depression and the global scale of psychological distress. Secondly, given that the 'friends' subscale barely demonstrated adequate internal reliability for the present sample, further research is needed to replicate these findings in order to provide new evidence on the internal reliability of this subscale. Thirdly, given that only schools that consented to be in the study were selected, there is the probability of a self-selection bias as well as the possibility that the selected schools were different from those that did not consent to be part of the study.

In summary, in this paper, we sought to provide external validation of the MSPSS in the Ghanaian context. Data emerging from the present Ghanaian sample of school-going adolescents showed the MSPSS to be internally reliable, with the validity of the factor structure of this scale being similar to the originally hypothesised three-factor structure. As demonstrated in this paper, adolescents in communal contexts such as the Northern region of Ghana might still be able to distinguish between different support sources. Our paper suggests that arguments for the two-factor structure that are based on the collective nature of the society need to be revisited. It would therefore seem that other contextual factors, translation and sampling issues might explain the emergence of either a single- or two-factor structure in communal societies and not necessarily the

closely-knit of these societies. In conclusion, it is worth noting that, although there was great support for the construct validity of MSPSS in the Ghanaian context, there is still a need for further research validating this measure of perceived social support among adolescent populations within this context.

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Appendix A: Multidimensional Scale of Perceived Social Support

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

Circle the "1" if you Very Strongly Disagree
Circle the "2" if you Strongly Disagree
Circle the "3" if you Mildly Disagree
Circle the "4" if you are Neutral
Circle the "5" if you Mildly Agree
Circle the "6" if you Strongly Agree
Circle the "7" if you Very Strongly Agree

Items	Responses						
1. There is a special person who is around when I am in need.	1	2	3	4	5	6	7
2. There is a special person with whom I can share joys and sorrows	1	2	3	4	5	6	7
3. My family really tries to help me.	1	2	3	4	5	6	7
4. I get the emotional help & support I need from my family.	1	2	3	4	5	6	7
5. I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7
6. My friends really try to help me.	1	2	3	4	5	6	7
7. I can count on my friends when things go wrong	1	2	3	4	5	6	7
8. I can talk about my problems with my family.	1	2	3	4	5	6	7
9. I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
10. There is a special person in my life who cares about my feelings	1	2	3	4	5	6	7
11. My family is willing to help me make decisions	1	2	3	4	5	6	7
12. I can talk about my problems with my friends	1	2	3	4	5	6	7

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