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Friendship Quality Scale: Conceptualization, Development and Validation

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Abstract

The purpose of this study is twofold: (1) to initialize a new conceptualization of positive feature based Friendship Quality (FQUA) scale on the basis of four dimensions: Closeness, Help, Acceptance, and Safety; and (2) to develop and validate FQUA scale in the form of reflective measurement model. The scale development and validation procedures suggested in literature were employed. A total of 480 Malaysian secondary school Form Four students sample was selected using Multistage Stratified Cluster Sampling. Data was analyzed using Exploratory Factor Analysis (EFA) techniques with the software of SPSS version 15.0. The reliability and construct validity were warranted with the parameter estimates lie within the acceptable range. The factor structure of FQUA scale showed its stability with the parameter estimates were found comparable in three different datasets. Approximately 62% of variance in FQUA was accounted for by Closeness, Help, Acceptance, and Safety. FQUA scale with 21 items measured was validated rigorously. Overall, this study has advanced a set of positive features of friendship in conceptualizing FQUA pertaining to the nature of reflective measurement where the positive features of friendship should be correlated with one and other. The validated FQUA scale deserves to be further explored to ensure its generalizability.

Keywords   Friendship Quality, Scale development and validation, Exploratory Factor analysis

Introduction

Friendship is characterized in ways based on how the relationships among the individuals are defined. Friendship is commonly referred as the voluntary and experience of a mutual relationship (Bukowski & Hoza, 1989; Hays, 1984; Margalit, 2010). Undoubtedly, friendship plays an integral part in individual daily life (Demir, Özdemir, & Weitekamp, 2006). The importance of friendships was highlighted over decades ago. Since fifties, Sullivan (1953) viewed friendship as a powerful presence in the life of developing children. However, friendship is not as simple as holding a mutual relationship. Literature reveals that children expect their friends fulfill their need in terms of facilitating social emotion goals for each other (Hays, 1984); and providing companionship, intimacy, and affection (Furman & Buhrmester, 1985). In addition, friendship is empirically supported able to protect children against being victimized and bullied by peers (Hodges, Boivin, Vitaro, & Bukowski, 1999). Overall, positive effects such as enhanced self-worth, hopes, protection from victimization are expected in sustaining a friendship. However, the quality of interactions in sustaining a friendship that can be positively impacts on children deserves attention in this study. This leads to the emergence of Friendship Quality (FQUA) deriving from the nature of friendship.

FQUA is well documented through several influential FQUA models. The influential FQUA models consist of positive and negative features of friendships. The significant FQUA models include Berndt and Perry (1986), Bukowski and Hoza (1989), Asher and Parker (1993) and Ladd et al. (1996). However, it is worthy to point out that the inclusion of both positive and negative features of friendships have violated the statistical consideration in a reflective construct as emphasized in this study. This is because the dimensions of a reflective construct are assumed to be correlated with one another (Urbach & Ahlemann, 2010, as cited in Thien & Nordin, 2012) due to the fact that the dimensions constitute internal consistency of the same underlying construct (Jarvis et al., 2003; MacKenzie et al., 2005), namely, Friendship Quality. Literature shows that Closeness, Acceptance, Help, and Safety are found to have positive relationship with one and other (Thien & Nordin, 2012). Conversely, Conflict is considerable to have negative correlation with Closeness, Acceptance, Help, and Safety. Alternatively, it can be drawn that the positive features of friendships: Closeness,

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Acceptance, Help, and Safety and negative features of friendships, namely, Conflict fail to constitute internal consistency in conceptualizing FQUA. As such, conflict is excluded from FQUA conceptualization in this study.

This led the study to initialize a new conceptualization of solely positive features based of FQUA by proposing a set of modified dimensions in underlying FQUA. Thus far, to the knowledge of researcher, only little FQUA model proposed a solely positive features of friendships. The significant example includes the earlier study by Furman and Buhrmester (1985). The research gaps mentioned has framed the purpose of this study. First, initializing a new conceptualization of positive feature based Friendship Quality (FQUA) scale on the basis of four dimensions: Closeness, Help, Acceptance, and Safety. Secondly, develops and validates a new FQUA scale in the form of reflective measurement model. This study indeed contributed to enrich FQUA literature by introducing a set of positive features of friendship in conceptualizing FQUA. Moreover, the validated FQUA scale deserves future studies for further improvement. In accordance with the purpose of the study, this paper commences with literature review towards conceptualization of FQUA. This followed by discussion of scale development and validation procedures. Findings are interpreted and discussed. Implications, limitations, and suggestions for future research are presented before drawing a conclusion. For convenience, the terminologies of dimensions and factors are used interchangeably in this study.

Literature Review

A fundamental understanding of high quality friendship has been identified to have positive effects on children, such as improving children's capacity to increase self-esteem (Hartup & Stevens, 1999). However, the earlier influential study by Berndt (1996) had iterated that FQUA was well reflected in the level of friendship features. Friendship feature is a term used to describe student characteristics demonstrated in a friendship (Berndt, 1996; 2002). Berndt (2002) further emphasizes that a high quality friendship is always characterized by high level of positive features such as pro-social behavior, intimacy, and loyalty whereas low levels of negative features such as conflicts and rivalry. Furthermore, Berndt (1996) argues that positive and negative features such as companionships and conflict should be examined together in order to determine the quality of the friendships. Berndt's (1996) argument is well documented with the emergence of several influential FQUA models that comprised the positive and negative features of friendship. As shown in Table 1, these models are proposed by Berndt and Perry (1986); Bukowski and Hoza (1989); Asher and Parker (1993); and Ladd et al. (1996). Bukowski and Hoza's (1989) model is the most adopted FQUA model in literature because of its more reliable and validated instrument to measure the FQUA research compared to other FQUA models (Bukowski, Boivin, & Hoza, 1991). This serves as the main reason Bukowski and Hoza's (1989) model is adapted with modification in this study.

Returning to the point of friendship features, notably, negative friendship features such as Conflict (Brendt & Perry, 1986; Bukowski & Hoza, 1989); and Conflict Resolution and Betrayal (Asher & Parker, 1993) is well documented in the models mentioned as emphasized by Brendt (2002). Nonetheless, Conflict is excluded from the conceptualization of FQUA in this study as earlier mentioned. On the other hand, it is worthy to point out that Companionship as defined by Bukowski and Hoza (1989) seems directly indicates the level of Closeness of a friendship as claimed by Thien and Nordin (2012). As such, Closeness is excluded in this study in order to avoid the overlapping conceptually meaning of Companionship. In addition, the advancement of a new dimension of FQUA, namely, Acceptance is convinced by Asher and Parker (1993). According to Asher and Parker (1993), quality of children's friendship is related with peer acceptance. This reflects that the higher the quality of children's friendship has, the higher the peer acceptance is. In fact, Acceptance which has supported as an indicator of quality of children' friendship is well documented in literature (e.g., Asher & Parker, 1993).

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Table 1
Dimensions of Friendship Quality Models from Different Authors

Author (year)	Dimension
Berndt & Perry (1986)	Play, Pro-social, Intimacy, Loyalty, Attachment, Conflict
Bukowski & Hoza (1989)	Companionship, Safety, Conflict, Help, Closeness
Asher & Parker (1993)	Self-validation, Help, Caring, Companionship, Intimate Exchange, Conflict and Betrayal, Conflict Resolution
Ladd, Kochenderfer & Coleman (1996)	Friendship Processes, Friendship Provision

Apart from Bukowski and Hoza's (1989) model, the ideas of Ladd, Kochenderfer, and Coleman (1996) deserve attention in conceptualizing FQUA. Ladd et al. (1996) specifies friendships into two specific domains: Friendship Processes and Friendship Provision. Friendship Processes are referred as the observable features of interactions that may influence the quality of the friendships. The observable features of interactions can be inferred by the Closeness and Intimacy of the friendships. Meanwhile, Friendship Provision referred as the benefits that the friendships provided to children such as Security, Trust, Intimacy, Companionship, and Support. Therefore, it is considerable to undertake Friendship Processes and Friendship Provision in reflecting FQUA model advanced by Bukowski and Hoza's (1989) with its dimensions as shown in Table 1. Combining the ideas of Ladd et al. (1996) with Bukowski and Hoza's (1989) model has led to the conceptualization of FQUA. FQUA is therefore conceptualized as the degree to which individual's willingness to interact to others in order to gains benefit either purposely or not from the generated friendship on the basis of four dimensions, namely: (1) Closeness, (2) Help, (3) Acceptance, and (4) Safety. The dimensions of Closeness, Help, Acceptance, and Safety are conceptualized and made operational in Table 2.

Table 2
Conceptualization and Operationalization

Dimension	Conceptualization	Operationalization
Closeness	The level of attachment by friend(s).	To what extent is a student attach to his or her friend(s).
Help	The mutual help offered by the participant in sustaining a friendship.	The extent to which a student will offer his or her mutual help to friend(s) who are having school-related problems.
Acceptance	The level of a student's acceptance by school friends either socially or emotionally.	To what extent is a student accepted by his or her school friend(s) either socially or emotionally.
Safety	The level of confidence or trust relied on friend(s).	To what extent is a student's confidence and trusts relied on his or her friend(s).

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Scale Development and Validation

The FQUA scale was developed and validated using the scale development and validation procedures suggested by MacKenzie, Podsakoff and Podsakoff (2011, p. 297) in behavioural research integrated with Thien, Nordin, and Hazri (2011). MacKenzie et al. (2011) and Thien et al. (2011) were chosen due to its comprehensive and rigorous stages in scale development and validation procedures with the inclusion of two main aspects. These two aspects refer to: (1) using qualitative and quantitative approach for content validity; and (2) conducting data preparation with the steps of data cleaning, missing data imputation, and statistical assumption testing such as normality, linearity, and multicollinearity. The hidden effects of conducting the process of data cleaning, missing data imputation, data preparation is to ensure the item quality by eliminating the poor items before assessing reliability and validity (Thien et al., 2011). In fact, the process of data cleaning, missing data imputation, and data preparation are essential in order to avoid the appearance of any extreme values that leads to the spurious findings. The process of item development and validation includes five stages: (1) item development; (2) Instrument design; (3) data collection; (4) data preparation; and (5) reliability and validation assessment.

Stage 1 Item Development

This study employed both deductive and inductive approach to develop the items. With deductive approach, the items that measure FQUA are generating in manner that operates the definition of each dimension as stated in Table 2. Meanwhile, with inductive approach, the opinion from three secondary school teachers and a group of 20 secondary school Form Five students are used to develop items inductively. The participants were excluded as the sample in this study. Backward translation is used with the items translated from English to *Malay* and back to English. The discrepancies between these two versions were resolved with the justification made by one female subject matter expert from Malaysian local university and one male Malaysian secondary school English specialist with the teaching experience of seven and 28 years respectively. This initial item pool is then subjected to a process of item content validation.

Content Validity

The study used qualitative and quantitative approaches to assess the content validity of the developed items. Therefore, this study performs its content validity assessment using qualitative and quantitative approaches to ensure there is sufficient rigor in the measure.

Qualitative Approach

Ten raters are invited to check the appropriateness and the suitability of the items of each dimension. The content of the FQUA scale is validated by three groups of raters, consisting of four lecturers from a Malaysian local university, four Malaysian secondary school teachers and two Form Five students. The first two groups of raters are purposely chosen in order to develop valid scales in this study. The raters' expertise and teaching experience for the first two groups are presented in Table 3. Based on the comments from the raters, the problems of ambiguous words in Malaysian national language, its generalization and content redundancy of the items are identified. The items are therefore refined and subjected to the testing of Inter Rater Reliability (IRR).

Quantitative Approach

The level of item suitability with 10-points Likert scale was quantified with Inter Rater Reliability (IRR). IRR is used to address whether the judges have assessed in a manner that relatively consistent with one another. The operation of each dimension served as the reference for the raters to make an

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accurate judgment in relation to the content validity for each item. Following the guidelines proposed by Shrout and Fleiss (1979), *ICC* was computed with the two-way mixed model as each item was rated by 10 raters using SPSS version 15.0. The unit of the analysis referred to the mean of the rating, namely, average measure reliability as shown in SPSS output. The result showed that 28 self-developed items have achieved the average measures of *ICC* with 0.96. The result indicated 96% of relative consistency of rating was provided by the raters. The remaining 4% implied that a number of problematic items were subjected to be improved based on the comments given by the raters. This stage ended with items improvement according to the comments given by the raters. Overall, a total of 38 refined items was retained. The procedures continued with scale design.

Stage 2   Scale Design

A pretest was conducted on ten students sample to ensure the appropriateness of question content, wording, sequence, format, layout, and instruction. This sample was excluded from participate in pilot study. A set of Malaysian National language version questionnaire with 6-point Likert scale, ranging from 1 (high strongly disagree), 2 (strongly disagree), 3 (disagree), 4 (agree), 5(strongly agree) to 6 (high strongly agree) were administered in pilot study.

Stage 3   Data Collection

A pilot test is conducted with the sample consists of 480 Malaysian secondary Form Four students. The issues of maintaining privacy; guaranteeing anonymity; and guaranteeing confidentiality of the participants were highlighted. The purpose was to reduce the risk of potential psychological harm, discomfort or stress to the participants that this study might generate implicitly. Therefore, the participation was voluntary and free from any coercion. Thus, participants were given clear information about the study. The informed consent from the Malaysian educational authorities was sought in order to administer the pilot study in Malaysian secondary schools. However, the parental consent for student participation was exempted. This was because students over the age of 16 deemed to be competence to give consent for themselves (Wiles, Heath, Crow, & Charles, 2005). Moreover, students with mental health problems or learning disabilities were excluded from this study.

Stage 4   Data Preparation

Data preparation commenced with data cleaning using SPSS FREQUENCIES procedure version 15.0. The data were confirmed entered correctly in order to avoid the presence of any out-of-range values. The process continued with imputing missing data by Estimation Maximization (EM) method with SPSS version 15.0.   Before making statistical assumption testing, scores in item level were transformed into the factor scores. Factor scores represent a composite score by summing the multiplication of each individual item scores with its factor score weight on a particular factor (Field, 2009). The values of factor scores weights were obtained using AMOS 18.0 OUTPUT PROCEDURE.

Normality

Empirically, the skewness and kurtosis of these three dimensions lied within the acceptance limit. As shown in Table 3, the skewness measure ranged from -3 and +3 whereas -8 and +8 for kurtosis measures at the level of significance, $\alpha = 0.05$ recommended by Kline (1998). This shows that the dimensions were statistically considered normally distributed.

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Table 3

Normality Examination

Dimension	Min	Max	Mean	sd	Skewness	Kurtosis
Closeness	1.42	6.00	4.55	0.85	-0.41	0.04
Help	1.00	6.00	4.17	0.39	-0.07	0.20
Acceptance	1.22	6.00	4.00	0.82	-0.32	0.34
Safety	1.00	6.00	3.84	0.95	-0.15	0.09

Linearity

The scatter plot matrix as illustrated in Figure 1 demonstrates the features of straight lines that characterized the linear relationship between any two dimensions. This implied that the underlying dimensions of FQUA, namely: Safety, Closeness, Acceptance, and Help were linearly correlated with each other.
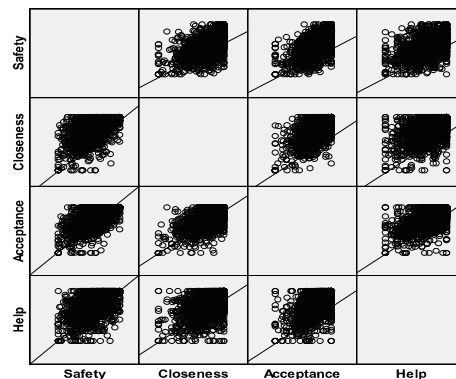
Figure 1

Scatterplot Matrix of FQUA

Multicollinearity

As pointed out in Table 4, the value of correlation which represented by the Pearson Coefficient, *r*, is below the cutoff value of .85 either between the variables or constructs. This can be seen as all the values of *r* ranged from .34 to .67. This indicated no multicollinearity was reported between the dimensions of (a) Closeness, (b) Help, (c) Acceptance, and (d) Safety. An initial pool items with 38 items with Closeness (12 items), (b) Safety (9 items), (c) Help (8 items), and (d) Acceptance (9 items) was then subjected to reliability and validity assessment.

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Table 4

Correlation Matrix

Dimension	Closeness	Help	Acceptance	Safety
Closeness	1			
Help	.50	1		
Acceptance	.67	.57	1	
Safety	.34	.34	.46	1

Stage 5   Reliability and Validity Assessment Using Exploratory Factor Analysis

The goal of EFA is to determine the new extracted factors or scales that can be best explained by a specific set of items for each variable undertaken in this study. Both Principal Component extracted and the Varimax rotation methods are used to produce the uncorrelated extracted factors with the eigenvalues greater than one. A suitable label was assigned to the new extracted factor(s) (if any) based on the conceptual meaning indicated by the corresponding items. There are three statistics measures to examine the underlying items for the extracted factor structure of each variable: (1) standardized factor loadings; (2) item to-Total Correlation; and (3) Cronbach's Alpha. Table 5 lists the adopted cutoff values of these statistics measure

Table 5

Cutoff Values of Statistics Measures for EFA

Statistics Measures	Cutoff Value	Suggested Reference
Standardized Factor Loading (λ)	.50	Hair et al. (2010)
Item to-Total Correlation (r)	.30	Pallant (2001)
Cronbach's Alpha (α)	.60	Drasgow (1984)

Table 6 shows the results of EFA yielded three orthogonal or uncorrelated factors. Concurrently, a total of 17 items were excluded for two reasons. First, factor loadings below the cutoff value of 0.5 suggested by Hair et al. (2010) Secondly, the items were found cross-loaded on two factors. Table 6 shows that four orthogonal or uncorrelated factors are yielded with a total of 21 items for overall dataset.

The first extracted factor comprised eight items, representing by Item 37, Item 38, Item 34, Item 31, Item 35, Item 36, Item 33, and Item 32. These items were initially labeled as Safety. The second extracted factor consisted of Item 27, Item 28, Item 24, Item 25, Item 26, and Item 29. The factor was labeled as Closeness. Meanwhile, the third extracted factor comprised Item 20, Item 19, Item 18, and Item 21. The interpretation of the mentioned items was found consistent with the Acceptance as earlier mentioned. The fourth extracted factor consisted of Item 10, Item 11, and Item 12. This factor focus on the frequency of friends offered their mutual help to those who have school related problems was initially labeled as Help.

A pool of 21 items of FQUA as appended was further purified based on the Item to Total Correlation estimate, r. No single item with the estimate values of r was found less than .30. The Cronbach's Alpha for Safety, Closeness, Acceptance, and Help were .88, .83, .84, and .81 respectively. The results revealed that the reliability of the scale was warranted.

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Table 6

Friendship Quality and its New Extracted Factors (Overall dataset)

Factor	Item	λ	r	α	AVE (%)	Total Variance Explained
Safety	37	.81	.71	.88	46.15	62.0
	38	.76	.62			
	34	.72	.70			
	31	.69	.64			
	35	.66	.63			
	36	.69	.69			
	33	.54	.62			
	32	.51	.61			
Closeness	27	.75	.67	.83	46.71	
	28	.73	.69			
	24	.69	.58			
	25	.66	.68			
	26	.66	.61			
	29	.60	.45			
Acceptance	20	.79	.67	.84	48.15	
	19	.73	.67			
	18	.62	.68			
	21	.62	.66			
Help	10	.86	.61	.81	58.69	
	11	.79	.73			
	12	.63	.62			

For validation assessment, all the factor loading estimations exceeded the cutoff values of .50 ranged from .51 to .86. This showed an excellent correlation between the underlying items with the respective dimension with the absence of multicollinearity. Significantly, the Average Variance Explained (AVE) which can be computed as the average of squared factor loadings in percentages was found approximately 46 to 60 percent. This indicated approximately half of the variance and above in FQUA was accounted for by Closeness, Help, Acceptance, and Safety respectively. A total of 62% variance explained in FQUA was accounted for by these four dimensions in the overall dataset.

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Table 7

Friendship Quality and its New Extracted Factors (First Split Dataset)

Factor	Item	λ	r	α	AVE (%)	Total Variance Explained
Safety	37	.79	.69	.86	43.93	62.0
	38	.75	.61			
	34	.60	.62			
	31	.63	.60			
	35	.62	.61			
	36	.65	.64			
	33	.57	.61			
Closeness	27	.75	.67	.83	46.71	
	28	.73	.69			
	24	.69	.58			
	25	.66	.68			
	26	.66	.61			
	29	.60	.45			
Acceptance	20	.79	.67	.84	48.15	
	19	.73	.67			
	18	.62	.68			
	21	.62	.66			
Help	10	.86	.61	.81	58.69	
	11	.79	.73			
	12	.63	.62			

The validation assessment continued with the split sample analysis to ensure the factor structure stability (Hair et al., 2010, p. 139). The overall dataset was then split into two equal samples of 240 respondents. The first split dataset consisted of data with odd positions in the overall dataset whereas the remaining data as the second split dataset. The similar data analysis procedures were rerun. The results were reexamined for comparability purposes. Table 7 and Table 8 show the comparable of parameter estimates for both split datasets. Comparison of three datasets was clearly pointed out in Table 9.

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Table 8

Friendship Quality and its New Extracted Factors (Second Split Dataset)

Factor	Item	λ	*r*	α	AVE (%)	Total Variance Explained
Safety	37	.84	.76	.88	56.55	63.0
	38	.76	.69			
	34	.79	.74			
	31	.71	.65			
	35	.67	.65			
	36	.73	.66			
Closeness	27	.82	.73	.84	47.49	
	28	.75	.72			
	24	.61	.59			
	25	.62	.66			
	26	.64	.64			
	29	.67	.45			
Acceptance	20	.81	.65	.83	50.56	
	19	.78	.70			
	18	.59	.63			
	21	.64	.63			
Help	10	.87	.56	.78	54.75	
	11	.69	.69			
	12	.64	.60			

Table 9

Summary of the Results

Parameter Estimates	Overall Dataset	First Split Dataset	Second Split Dataset
Standardized Factor Loadings (λ)	$.51 \leq \lambda \leq .81$	$.52 \leq \lambda \leq .85$	$.59 \leq \lambda \leq .87$
Item- to Total Correlation (*r*)	$.61 \leq r \leq .71$	$.54 \leq r \leq .77$	$.45 \leq r \leq .76$
Cronbach's Alpha (α)	$.81 \leq \alpha \leq .88$	$.82 \leq \alpha \leq .86$	$.78 \leq \alpha \leq .88$
AVE	$.48 \leq AVE \leq .59$	$.43 \leq AVE \leq .62$	$.47 \leq AVE \leq .56$
Total Variance Explained	62%	62%	63%

The parameter estimates of Cronbach's Alpha, Item-to Total Correlation; factor loadings estimations, AVE, and total variance explained seem comparable across the three datasets. The only notable occurrences were Item 29, Item 32, and Item 33. Item 29 which originally underlying Closeness as shown in Overall dataset was excluded from First Split Dataset. Meanwhile, Item 32 which initially underlay Safety in Overall Dataset was found shifted to Acceptance for the First Split Dataset as shown in Table 7; and excluded from Second Dataset. Apart from that, Item 33 was found excluded from Second Split Dataset. The reason

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for the item deletion is due to the value of λ which below .50. However, in this exploratory study, Item 29, Item 32, and Item 33 were reasonable to be included due to its appropriate conceptual meaning to measure the respective underlying dimension.

Discussion

The findings have delineated FQUA as a multidimensional construct that can be explained by a set of positive features of friendship dimensions: (1) Closeness, (2) Help, and (3) Acceptance, (4) Safety. Remarkably, the empirical findings were found signified the nature of a reflective measurement of Friendship Quality. This can be seen as the four dimensions were found correlated with one and others linearly as claimed by Jarvis et al. (2003) and MacKenzie et al. (2005). Notably, approximately two third of variance in FQUA was accounted for by Closeness, Help, Acceptance, and Safety based on the results of EFA. In summation, the results of EFA suggests that uncorrelated four-factor solution of FQUA has met the criteria of simplicity (Sethi & King, 1991), interpretability (Leader & Sethi, 1992), and a reasonable percentage of variance explained (Bernstein, 1998). The validation of FQUA scale was warranted. In addition, data stability was supported using split sample analysis. As a consequent, a Malaysian secondary school version of FQUA scale with 21 items measured was validated rigorously. Significantly, this study deserves attention in two main aspects. First, the results have shown the applicability of the modified version of Bukowski and Hoza (1991) model and the accepted ideas of Ladd et al. (1996) in forming a FQUA scale based on Malaysian secondary school context. Secondly, Malaysian secondary school students perceive FQUA strongly related to the level of friends' acceptance in terms of emotional and socially, attachment, confidence and trust, as well as mutual help offered by their friend(s). The validated dimension of Acceptance serves as the contribution of this study in literature. This is because least attention has been paid on Acceptance in existing FQUA studies such as Furman and Buhrmester (1985). In fact, not much discussion can be presented in relation to the previous studies as this study is truly exploratory in nature. However, this study has enriched FQUA literature particularly in modifying the existing FQUA model in the form of reflective measurement model along with the positive features of friendship. More importantly, the findings of this study are found relevant in proposing implications as described follows.

Practical Implications

Imperatively, the FQUA scale has practical implication as an evaluation tool for psychological and counselling based intervention program either at school and regulatory level. At school-level, these validated scales can be used as a survey instrument to assess quality of school life based from the perspective of students' friendship quality. FQUA scale can be used to identify the factors related to student drop out or truancy in handling students' disciplinary problems. FQUA scale can be applicable to other research area of social psychology such as adolescence disabilities and mental health. Practitioners can be benefited from the validated FQUA scale for the purpose of further refinement and validation.

Limitations, Suggestions and Conclusion

Although the resulting SQSL scale has been developed using the rigorous development and validation procedures, the study is not without limitations. This study has its limitation in that about 38% of variance left unexplained. One of the possible reasons is the absence of measurement theory to explain the relationship between FQUA and its underlying dimension: Closeness, Help, Acceptance, and Safety. Nonetheless, this provides gaps for future studies to suggest the theoretical based dimensions in relation to FQUA. Furthermore, the use of self-developed questionnaire is restricted to secondary school students. Therefore, it is strongly suggested that future studies could be conducted on other educational level to ensure its generalization even though the factor structure stability was warranted. For example, the samples from the primary schools or colleges are recommended to cross-validate the research findings. This suggestion is parallel with MacKenzie et al. (2011) who emphasize the

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importance to cross validate the psychometric properties by using a new sample. Thirdly, the factor structure which extracted from EFA can be further confirmed with Confirmatory Factor Analysis (CFA) in future research. In summation, the validated FQUA scale is strongly suggested to be explored in other area of research using different research designs and statistical analysis techniques to ensure its generalization. It would be possible, in another extremes, a new FQUA scale with solely negative features of friendship can be proposed in future studies.

As a conclusion, this study has enriched FQUA literature by conceptualizing a positive feature based FQUA scale integrated from Bukowski and Hoza (1989) and Ladd et al. (1996) in forming a reflective measurement model. The newly FQUA scale consists of 21 validated items are developed using the rigorous scale development and validation procedures. Significantly, this study deserves attention for future scale improvement and enrichment studies based on the aforementioned implications, limitations, and suggestions.

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Appendix

Dimension	Item	Description
Safety	37	I believe all the information given by my friends.
	38	My friends never break a promise.
	34	I am confident that my friends will not leak my secret.
	31	My friends never lie to me.
	35	I always listen to my friends' advice.
	36	I feel safe when the precious belongings are kept by my friends.
	33	I inform my friends immediately if he or she encounters problems in school.
	32	I feel safe when accompanied by my friends.
Closeness	27	I always joke with my friends.
	28	I understand my friends' mood.
	24	I always chat with my friends even if we are from different classes.
	25	My friends and I always share our life experience.
	26	I understand the background of my friends.
	29	I would not feel shy when performing something humorous in front of my friends.
Acceptance	20	My friends forgive me easily.
	19	My friends and I can overcome differences in our opinion immediately.
	18	My friends treat me well.
	21	My relationships with my friends are like brothers and sisters.
Help	10	My friends correct my mistakes in my homework.
	11	My friends always help me when I have problems in completing my homework.
	12	My friends help me to solve problems.