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Validation of Bangla parenting style and dimension questionnaire

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Abstract

Objectives: There has been a plethora of studies conducted on different aspects of parenting and how it affects children. However, assessment of parenting style and dimension is untouched in Bangladesh. The Parenting Style and Dimension Questionnaire (PSDQ) is a self-reporting questionnaire responded by parents regarding their parenting practices, which assesses the three categories of parenting styles, namely, authoritative, authoritarian, and permissive. It was aimed to adapt and validate PSDQ in Bangla which is the mother tongue of the people of Bangladesh.

Methods: The validation study was conducted from January 2017 to June 2018 in three schools of Dhaka city with the self-reporting semi-structured Bangla version of PSDQ. The adaptation of PSDQ to Bangla was performed according to the state-of-the-art procedure of forward–backward translation. Parents having children aged 6–16 years were approached through schools to participate in the study. Data were collected from 349 parents and analyzed using Statistical Package for the Social Science version 16.0 software.

Results: Cronbach's alpha of PSDQ Bangla was 0.84, which signifies a good internal consistency. Cronbach's alpha of authoritative domain was 0.95, authoritarian domain 0.88, and permissive domain 0.78. A total of three factors were extracted using exploratory factor analysis with varimax rotation after discarding four items that had poor correlation and factor loading values. The three extracted factors were authoritative, authoritarian, and permissive; these are similar with the initial three dimensions of PSDQ.

Conclusions: Current study resulted in PSDQ Bangla, which retains 35 items in 3 domains with distribution of 20 items in authoritative domain, 9 items in authoritarian domain, and 6 items in permissive domain. The 35-item PSDQ Bangla can be a psychometrically reliable and valid tool to use in clinical setting of psychiatric practices in Bangladesh, especially to deal with child psychiatric disorders.

INTRODUCTION

There has been a plethora of studies conducted on different aspects of parenting and how it affects children. Parenting style refers to a general child-rearing pattern that characterizes parents' behaviors toward their child(ren) (Deslandes et al. 1997). It is the global construct that reflects the overall emotional tone of parent–child relationship (Chao 2001). Diana Baumrind identified as well as defined three different parenting styles, namely, authoritarian, authoritative, and permissive parenting style (Baumrind 1971). In addition, Maccoby and Martin (1983) mentioned that parenting styles arise from the crossing of two different dimensions, that is, parental demandingness/control and parental responsiveness

(Maccoby and Martin 1983; Tagliabue et al. 2014). Categorizing parents according to whether they are high or low on parental demandingness and responsiveness creates a typology of four parenting styles, namely, authoritative, authoritarian, indulgent, and uninvolved (Maccoby and Martin 1983). The increasing investigation of parenting styles and their links with developmental outcomes in childhood and adolescence has been accompanied by a rise in self-report instruments measuring parenting styles (Olivari et al. 2013; Tagliabue et al. 2014). Among them, Robinson et al. (1995) created a widely used instrument, the Parenting Style and Dimension Questionnaire (PSDQ) (Robinson et al. 1995; Tagliabue et al. 2014). The PSDQ is a self-reporting instrument responded by parents regarding their parenting practices in daily life, which

assesses the three categories of parenting styles, namely, authoritative, authoritarian, and permissive. Parenting style has both short- and long-term effects on the development of a child(ren). However, it has been poorly studied in Bangladesh. The research implications of developing such a scale has not been emphasized in the country. Thus, the assessment as well as modification of parenting toward expected direction is theoretically impossible among the parents whose children are being presented with psychiatric disorders. Psychometrically valid scales in indigenous languages would foster research and better mental health services as well. Furthermore, addressing the management of child psychiatric disorders with biopsychosocial approach invariably demands the involvement of parents. Hence, choosing appropriate strategies to shape the parenting further demands the assessment of enduring styles. So, it was aimed to develop a culturally adapted and validated Bangla version of PSDQ for the assessment of parenting style in Bangladesh.

METHODS

Ethical Aspects

The study was conducted by complying the declaration of Helsinki 1964. Formal permission was obtained on May 09, 2016 from Clyde C. Robinson (Robinson et al., 1995) who developed the questionnaire. Before starting this study, the research protocol was approved by the Institutional Review Board (IRB) of Bangabandhu Sheikh Mujib Medical University (BSMMU) **(BSMMU/2016/10524)**, Dhaka, which as approved on October 15, 2016 and the protocol was reviewed on 123th IRB meeting held on October 08, 2016. Different steps of the study were supervised by the Department of Psychiatry, BSMMU. Informed written consent was obtained from parents without any influences. Parents were approached through 3 selected schools with prior permission from the school committee as well as from the headmasters. Data were collected anonymously, confidentiality of the data was ensured adequately, and any unauthorized access to data was not possible.

Adaptation of PSDQ into Bangla

The adaptation of PSDQ into Bangla was performed according to the state-of-the-art procedure of forward–backward translation (Beaton et al. 2000; Arafat et al. 2016; Arafat 2016). One medical graduate and 1 lay person were involved in forward translation procedure. Both of the translators were native speakers of the Bangla and fluent in English.

The forward translated versions were compiled from the two forward translations to address the discrepancies between the versions, so that standard version of a forward translation can be made, which is recommended for standard translation process (Beaton et al. 2000; Arafat et al. 2016). Then the compiled version was translated back into English by a professional translator with experience in medical translation and by one medical graduate who had not been involved in forward translation steps. The back-translated versions were then compiled and compared by the researcher to resolve any discrepancy for complying the validation guideline (Beaton et al. 2000; Arafat et al. 2016). After that, all the four versions were submitted to the expert committee formulated for this validation study. The expert committee modified and finalized the items of the PSDQ Bangla, and then pretesting was conducted among 30 parents who were approached from general population. During the expert committee review, some items were discarded and some were merged into single item to ensure the cultural equivalence (Beaton et al. 2000; Arafat et al. 2016).

The original instrument (PSDQ English) has 62 items (Table 1). The authoritative domain has 27 items: 1, 3, 5, 7, 9, 12, 14, 16, 18, 21, 22, 25, 27, 29, 31, 33, 35, 39, 42, 46, 48, 51, 53, 55, 58, 60, and 62. The authoritarian domain has 20 items: 2, 6, 10, 13, 17, 19, 23, 26, 28, 32, 37, 40, 43, 44, 47, 50, 54, 56, 59, and 61. The permissive domain has 15 items: 4,8, 11, 15, 20, 24r, 30, 34, 36, 38r, 41, 45, 49, 52r, and 57 ("r" indicates the reverse codes as the items were negatively phrased). The PSDQ uses response scales on a continuum from "Always (5)" to "Never (1)." Parents received a score on all three parenting dimensions.

Discarded Items by Review Committee

Item deletion was considered when items having less than 0.80 content validity index in agreement with Arafat et al. (2016, 2017). Generally, content validity can be assessed through standard back translation process, reviewing literature, and skillful panel opinion and content validity index (Arafat et al. 2016, 2017; Arafat 2016; Algin et al. 2018). Item 60 (I channel our child's misbehavior into a more acceptable activity) was deleted from authoritative domain. No item was deleted from the authoritarian domain. Item 11 (I spoil our child), item 24 (I appear confident about parenting abilities), item 38 (I carry out discipline after our child misbehaves), item 49 (I bribe our child with rewards to bring about compliance), and item 52 (I set strict well-established rules for our child) were discarded from permissive domain (Table 1).

Table 1. PSDQ English (62 Items).

1.[He encourages] [I encourage]our child to talk about the child's troubles.
2.[He guides] [I guide] our child by punishment more than by reason.
3.[He knows] [I know]the names of our child's friends.
4.[He finds] [I find] it difficult to discipline our child.
5.[He gives praise] [I give praise] when our child is good.
6.[He spanks] [I spank] when our child is disobedient.
7.[He jokes and plays] [I joke and play] with our child.
8.[He withholds] [I withhold] scolding and/ or criticism even when our child acts contrary to our wishes.
9.[He shows] [I show] sympathy when our child is hurt or frustrated.
10.[He punishes] [I punish] by taking privileges away from our child with little if any explanations.
11.[He spoils] [I spoil] our child.
12.[He gives] [I give] comfort and understanding when our child is upset.
13.[He yells or shouts][I yell or shout] when our child misbehaves.
14.[He is][I am] easy going and relaxed with our child.
15.[He allows] [I allow] our child to annoy someone else.
16.[He tells][I tell]child our expectations regarding behavior before the child engages in an activity.
17.[He scolds and criticizes][I scold and criticize] to make our child improve.
18.[He shows] [I show] patience with our child.
19.[He grabs][I grab]our child when he/she is being disobedient.
20.[He states][I state] punishments to our child and does not actually do them.
21.[He is] [I am] responsive to our child's feelings or needs.
22.[He allows][I allow]our child to give input in to family rules.
23.[He argues][I argue] with our child.
24.[He appears][I appear] confident about parenting abilities.
25.[He gives][I give] our child reasons why rules should be obeyed.
26.[He appears][I appear]to be more concerned with own feelings than with our child's feelings.
27.[He tells][I tell]our child that we appreciate what the child tries or accomplishes.
28.[He punishes][I punish]by putting our child off somewhere alone with little if any explanations.
29.[He helps][I help]our child to understand the impact of behavior by encouraging our child to talk about the consequences of his/her own actions.
30.[He is][I am]afraid that disciplining our child for misbehavior will cause the child to not like his/her parents.
31.[He takes] [I take] our child's desires into account before asking the child to do something.
32.[He explodes][I explode]in anger towards our child.
33.[He is][I am] aware of problems or concerns about our child in school.
34.[He threatens][I threaten]our child with punishment more often than actually giving it.
35.[He expresses][I express]affection by hugging, kissing, and holding our child.
36.[He ignores][I ignore]our child's misbehavior.
37.[He uses][I use]physical punishment as a way of disciplining our child.
38.[He carries][I carry]out discipline after our child misbehaves.
39.[He apologizes][I apologize] to our child when making a mistake in parenting.
40.[He tells][I tell]our child what to do.
41.[He gives] [I give] into our child when the child causes a commotion about something.
42.[He talks it over and reasons][I talk it over and reason]with our child when the child misbehaves.

_{Continued}**Table 1.** PSDQ English (62 Items).

43.[He slaps][I slap]our child when the child misbehaves.
44.[He disagrees][I disagree]with our child.
45.[He allows][I allow]our child to interrupt others.
46.[He has][I have] warm and intimate times together with our child.
47.When two children are fighting, [he disciplines][I discipline]children first and asks questions later.
48.[He encourages][I encourage] our child to freely express (himself)(herself) even when disagreeing with parents.
49.[He bribes][I bribe]our child with rewards to bring about compliance.
50.[He scolds or criticizes][I scold or criticize]when our child's behavior doesn't meet our expectations.
51.[He shows][I show]respect for our child's opinions by encouraging our child to express them.
52.[He sets][I set]strict well-established rules for our child.
53.[He explains][I explain] to our child how we feel about the child's good and bad behavior.
54.[He uses][I use]threats as punishment with little or no justification.
55.[He takes][I take]into account our child's preferences in making plans for the family.
56.When our child asks why (he)(she)has to conform, [he states][I state]: because I said so, orI am your parent and I want you to.
57.[He appears][I appear]unsure on how to solve our child's misbehavior.
58.[He explains][I explain] the consequences of the child's behavior.
59.[He demands][I demand] that our child does/do things.
60.[He channels][I channel] our child's misbehavior into a more acceptable activity.
61.[He shoves][I shove]our child when the child is disobedient.
62.[He emphasizes][I emphasize]the reasons for rules.

Item Merging in Authoritative Domain

Item merging was performed as per the recommendation of the expert committee during the expert committee review. Item 7 (I joke and play with our child) and item 46 (I have warm and intimate times together with our child) were merged into a single item. Item 9 (I show sympathy when our child is hurt or frustrated) and item 12 (I give comfort and understanding when our child is upset) were merged. Item 22 (I allow our child to give input into family rules) and item 55 (I take into account our child's preferences in making plans for the family) were merged into single item. Item 29 (I help our child to understand the impact of behavior by encouraging our child to talk about the consequences of his/her own actions) and item 58 (I explain the consequences of the child's behavior) were merged. Item 48 (I encourage our child to freely express (himself) (herself) even when disagreeing with parents) and item 51 (I show respect for our child's opinions by encouraging our child to express them) were merged (Table 2).

Item Merging in Authoritarian Domain

Item 6 (I spank when our child is disobedient), item 19 (I grab our child when he/she is being disobedient), item 37 (I use physical punishment as a way of disciplining our child), item 43 (I slap our child when the child misbehaves), item 61 (I shove our child when the child is disobedient) were merged into single item and 4 items were reduced. Item 10 (I punish by taking privileges away from our child with little if any explanations) and item 28 (I punish by putting our child off somewhere alone with little if any explanations) were merged. Item 13 (I yell or shout when our child misbehaves) and item 32 (I explode in anger towards our child) were merged. Item 17 (I scold and criticize to make our child improve) and item 50 (I scold or criticize when our child's behavior doesn't meet our expectations) were merged. Item 23 (I argue with our child) and item 44 (I disagree with our child) were merged. Item 40 (I tell our child what to do) and item 59 (I demand that our child does/do things) were merged (Table 2).

Item Merging in Permissive Domain

Item 4 (I find it difficult to discipline our child) and item 57 (I appear unsure on how to solve our child's misbehavior) were merged. Item 15 (I allow our child to annoy someone else) and item 45 (I allow our child to interrupt others) were merged. Item 20 (I state punishments to our child and does not actually do them) and item 34 (I threaten our child with

Table 2. Merging of items.

Item	Initial Item	Merged item
	Authoritative Domain	
7	I joke and play with our child	আমি আমাদের সন্তানের সাথে উষ্ণ এবং অন্তরঙ্গ সময় কাটাই।
46	I have warm and intimate times together with our child	(I pass warm and intimate times with our child)
9	I show sympathy when our child is hurt or frustrated	আমাদের সন্তান কোন কষ্ট পেলে বা হতাশাগ্রস্ত হলে আমি সমবেদনা দেখাই।
12	I give comfort and understanding when our child is upset	(I show sympathy when our child is upset or frustrated)
22	I allow our child to give input into family rules	পরিবারের জন্য কোন পরিকল্পনা তৈরিতে আমি আমাদের সন্তানের পছন্দগুলো কে বিবেচনা করি।
55	I take into account our child's preferences in making plans for the family	(I consider our child's likings during making any plan for the family)
29	I help our child to understand the impact of behavior by encouraging our child to talk about the consequences of his/her own actions	আমি আমাদের সন্তানের ব্যবহারের প্রভাব বুঝিয়ে বলি।
58	I explain the consequences of the child's behavior	(I explain our child about the consequences of the child's behavior)
48	I encourage our child to freely express (himself) (herself) even when disagreeing with parents	আমি আমাদের সন্তান কে নিজেকে সচ্ছন্দে প্রকাশ করতে উৎসাহিত করি এমনকি যখন তারা বাবা মায়ের সাথে ভিন্নমত পোষন করে।
51	I show respect for our child's opinions by encouraging our child to express them	(I encourage our child to express (himself) (herself) freely even when deferring with parents)
	Authoritarian Domain	
6	I spank when our child is disobedient	
19	I grab our child when he/she is being disobedient	আমাদের সন্তান অবাধ্য হলে আমি তাকে চড় দেই।
37	I use physical punishment as a way of disciplining our child	
43	I slap our child when the child misbehaves	(I slap our child when he/she is being disobedient)
61	I shove our child when the child is disobedient	
10	I punish by taking privileges away from our child with little if any explanations	যথেষ্ট ব্যাখ্যা না দিয়েই আমি আমাদের সন্তানের সুবিধা কেড়ে নিয়ে শাস্তি দেই।
28	I punish by putting our child off somewhere alone with little if any explanations	(I punish our child by taking away privileges without adequate explanations)
13	I yell or shout when our child misbehaves	আমাদের সন্তান থারাপ আচরণ করলে আমি চিৎকার চেঁচামেচি করি।
32	I explode in anger towards our child	(I shout when our child misbehaves)
17	I scold and criticize to make our child improve	আমাদের সন্তানের উন্নতির জন্য আমি বকা দেই ও সমালোচনা করি।
50	I scold or criticize when our child's behavior doesn't meet our expectations	(I rebuke and criticize for improvement of our child)
23	I argue with our child	আমাদের সন্তানের সাথে আমি দ্বিমত পোষণ করি।
44	I disagree with our child	I contradict with our child
40	I tell our child what to do	আমি চাই আমাদের সন্তান যেন কাজ করে।
59	I demand that our child does/do things	(I tell our child to do works)
	Permissive Domain	
4	I find it difficult to discipline our child	আমি আমাদের সন্তানকে নিয়ম শৃঙ্খলায় রাখতে সমস্যাবোধ করি।
57	I appear unsure on how to solve our child's misbehavior	(I feel problematic to keep our child disciplined)
15	I allow our child to annoy someone else	আমাদের সন্তান অন্যদের ব্যঘাত ঘটালে আমি কিছু বলি না।
45	I allow our child to interrupt others	(I don't tell anything to our child when (s)he disturbs others)
20	I state punishments to our child and does not actually do them	আমি আমাদের সন্তানকে মুখে শাস্তির কথা বললেও আসলে তা দেই না।
34	I threaten our child with punishment more often than actually giving it	(I don't punish our child though I state)

punishment more often than actually giving it) were merged (Table 2).

Although the original PSDQ pertains 62 items after content validity index, the expert committee meeting the prefinal PSDQ Bangla pertained 39 items. The distribution of the items as per domain is given as follows: authoritative items (21 items) 1, 3, 5, 8, 11, 12, 14, 16, 17, 19, 21, 22, 23, 25, 27, 30, 32, 33, 35, 37, 39; authoritarian (11 items) 2, 6, 9, 10, 13, 18, 28, 31, 34, 36, 38; and permissive (7 items) 4, 7, 15, 20, 24, 26, 29.

Study Place and Procedure

This validation study was conducted from January 2017 to June 2018 in three schools of Dhaka city with the self-reporting semi-structured Bangla version of PSDQ. The purposively selected schools were the Engineering University School & College and Nabakumar Institute & Dr. Shahidullah College, and Academia. Engineering University School & College and Nabakumar Institute & Dr. Shahidullah College are Bangla medium school and Academia is an English medium school. Nabakumar Institute & Dr. Shahidullah College was considered as lower middle social class, Engineering University School & College was considered as middle-class background, and Academia was considered as representation of upper class in socioeconomic background. Parents having children aged 6–16 years were approached through schools to participate in the study. Sample size was estimated based on 5:1 ratio of participants to item as different recommendations are available regarding the ratio with consideration of rules of thumb as participants to variables 2:1 to 20:1 (Arafat et al. 2016; Arafat 2016; Anthoine et al. 2014). With proper permission and assistance, author visited the schools. Then the author visited the classrooms to convince the children to deliver the questionnaire to their parents and to get back it on a fixed date. Author revisited on the assigned date and collected the responded questionnaire. A total 502 questionnaire were distributed, and data were collected from 349 parents. After collection, data were analyzed using Statistical Package for the Social Science (SPSS) version 16.0 software.

Data Analysis

Sociodemographic variables were analyzed and presented as frequency distribution. The response distribution of PSDQ Bangla was in 5-point Likert scale ranging from 1 (lowest) to 5 (highest). Thus, the item mean was calculated on the same distribution. Psychometric properties of PSDQ Bangla were assessed as per standard recommendations (Arafat et al. 2016,

2017; Arafat 2016; Algin et al. 2018). Reliability was assessed in internal consistency form by Cronbach's alpha coefficient and a cut-off of ≥0.70 was considered acceptable, which is suggested by standard recommendations (Arafat et al., 2016). Face validity was assessed by following standard translation, back translation process, and expert committee review, which is supported by recommendations (Arafat et al. 2016, 2017; Beaton et al. 2000; Arafat 2016; Algin et al. 2018; Parsian and Dunning 2009). Content validity was also assessed by following standard translation process and content validity index, which is supported by existing recommendations (Arafat et al. 2016, 2017; Beaton et al. 2000; Arafat 2016; Algin et al. 2018; Parsian and Dunning 2009). Construct validity was assessed using exploratory factor analysis with principal component analysis (PCA) with varimax rotation. Factor rotation was performed to ascertain the factors of the construct that is preloaded in the SPSS software. Criterion validity could not be assessed because of the lack of culturally appropriate instrument.

RESULTS

Data were collected from three schools of Dhaka city, namely, Nabakumar School; Engineering University School and College, BUET campus; and Academia school. Among the three schools, Academia is an English medium school and others are Bangla medium school. About half (49%) of the parents were from Engineering University School and College, 28.37% were from the Nabakumar School, and 22.64% were from Academia (Table 3). Among the 502 distributed questionnaires, 349 questionnaires were collected, which signified the response rate of about 70%. Among the 349 parents, 129 (37%) were father and 220 (63%) were mothers. The mean age of the respondents was 39.30 ± 7.5 (mean ± SD) years, minimum age of a parent was 22 year, and maximum age was 62 years. The largest group of parents (29.23%) were in the age range of 36–40 years, 41.55% had academic qualification of Masters and above, about 40% were housewives, and about 80% were from nuclear family background (Table 3). Families with single earning member with parents and/or children was considered as nuclear family and multiple earning persons living together in same family was considered as extended family.

Reliability Assessment

Distribution of item characteristics and correlation analysis revealed item 25 from authoritative domain, item 31 and item 36 from authoritarian domain, and item 15 from permissive domain have different distribution from the other items of

Table 3. Sociodemographic variables of responding parents (n = 349).

Variable	Frequency	Percent
Age in years		
21–25	10	2.87
26–30	24	6.88
31–35	71	20.34
36–40	102	29.23
41–45	76	21.78
46–50	39	11.17
51–55	7	2.01
56–60	4	1.15
61–65	3	0.86
Missing data	13	3.72
Educational qualification		
Under S.S.C. (below 10 academic year)	33	9.46
S.S.C. (above 10 academic year)	37	10.60
H.S.C. (above 12 academic year)	68	19.48
Graduation/ Honors (usually above 16 academic year)	59	16.91
Postgraduation /others(both academic and professional)	145	41.55
Missing data	7	2.01
Religion		
Islam	320	91.69
Hindu	24	6.88
Others	1	0.29
Missing data	4	1.15
Occupation		
Housewife	139	39.83
Service holder (both civil and private)	90	25.79
Doctor	9	2.58
Teacher	43	12.32
Lawyer	3	0.86
Business (any category)	23	6.59
Others	2	0.57
Missing data	40	11.46
Types of family		
Nuclear (individual with children and parents; single earning person)	278	79.66
Extended (multiple earning persons living together)	67	19.20
Missing data	4	1.15
Respondents		
Father	129	36.96
Mother	220	63.04
School		
Nabakumar	99	28.37
Engineering University School and College	171	49.00
Academia	79	22.64

that domain with poor correlation with other items (Table 4). The score was calculated as per the response in 5-point Likert scale ranging from 1 to 5, and the mean was calculated based on that. So, items 15, 25, 31, and 36 were discarded based on the response distribution (poor correlation and item characteristics). The internal consistency of the PSDQ Bangla was measured using Cronbach's alpha, which was 0.84. Cronbach's alpha of authoritative domain was 0.95; authoritarian domain was 0.88, and permissive domain was 0.78 (Table 5).

Table 4. Distribution of item characteristics of PSDQ Bangla.

Item	Mean (Range 1–5)	SD	Correlation (correlation coefficient of score with total score)
Authoritative domain			
Q1	4.40	0.96	
Q3	4.23	0.97	0.55
Q5	4.60	0.80	0.60
Q8	4.50	0.86	0.70
Q11	4.35	0.93	0.60
Q12	4.16	0.95	0.48
Q14	4.24	0.98	0.56
Q16	4.42	0.95	0.53
Q17	4.42	0.99	0.49
Q19	4.43	0.97	0.48
Q21	4.15	0.98	0.45
Q22	4.51	0.85	0.49
Q23	3.96	1.21	0.32
Q25	2.49	1.32	0.01
Q27	4.07	1.12	0.34
Q30	4.24	0.89	0.37
Q32	3.94	1.04	0.35
Q33	4.21	0.95	0.39
Q35	4.16	0.90	0.41
Q37	4.28	0.88	0.45
Q39	4.22	0.91	0.38
Authoritarian domain			
Q2	1.83	1.20	
Q6	2.06	1.11	0.61
Q9	1.36	0.79	0.44
Q10	2.18	1.13	0.60
Q13	2.27	1.26	0.57
Q18	1.76	1.19	0.51
Q28	2.18	0.97	0.42
Q31	4.05	1.30	-0.15
Q34	1.76	1.09	0.52
Q36	3.07	1.46	0.13
Q38	2.40	1.53	0.47
Permissive domain			
Q4	1.81	1.01	
Q7	2.01	0.91	0.44
Q15	3.03	1.27	0.13
Q20	1.69	0.95	0.46
Q24	1.56	0.96	0.49
Q26	2.14	0.94	0.37
Q29	1.59	1.10	0.49

Table 5. Internal consistency of the PSDQ Bangla.

Reliability Statistics		
	Cronbach's alpha	No. of Items
Total scale	0.84	35
Authoritative	0.95	20
Authoritarian	0.88	9
Permissive	0.78	6

Table 6. Rotated component matrix of PSDQ Bangla obtained by varimax rotation.

Component Matrix			
	Component		
Item	1	2	3
Q1-AV 1	0.65		
Q2-AN 1		0.67	
Q3-AV2	0.62		
Q4-PV1			0.48
Q5-AV3	0.71		
Q6-AN2		0.68	
Q7-PV2			0.56
Q8-AV4	0.77		
Q9-AN3		0.49	
Q10-AN4		0.62	
Q11-AV5	0.79		
Q12-AV6	0.63		
Q13-AN5		0.65	
Q14-AV7	0.76		
Q15-AV8	0.77		
Q16-AV9	0.78		
Q17-AN6		0.53	
Q18-AV10	0.74		

Component Matrix			
	Component		
Q19-PV3			0.49
Q20-AV11	0.73		
Q21-AV12	0.72		
Q22-AV13	0.48		
Q23-PV4			0.46
Q24-PV5			0.54
Q25-AV14	0.59		
Q26-AN7		0.43	
Q27-PV6			0.46
Q28-AV15	0.65		
Q29-AV16	0.61		
Q30-AV17	0.74		
Q31-AN8		0.55	
Q32-AV18	0.64		
Q33-AV19	0.71		
Q34-AN9		0.50	
Q35-AV20	0.63		

AV= Authoritative, AN= Authoritarian, PV= Permissive

Validity Assessment

Face validity and content validity were systematically assessed and maintained during the development of the research instrument (PSDQ Bangla) (Arafat et al. 2016, 2017; Beaton et al. 2000; Arafat 2016; Algin et al. 2018; Parsian and Dunning 2009). Expert committee assessed translation of every item by comparing the translations and back translations (Arafat et al. 2016, 2017; Beaton et al. 2000; Arafat 2016; Algin et al. 2018; Parsian and Dunning 2009). Construct validity was assessed by EFA of the principal component with varimax rotation. The EFA with the principal component with varimax

rotation was used to detect the factorial structure in observed measurements. The KMO and Barlett's test of sphericity were applied to the fitness of data for factor analysis based on the sample size of the current validation study. The KMO of the present study was found 0.93 (p=0.000) and a value greater than 0.60 is considered as adequate sample size of study (Arafat et al., 2016; Arafat, 2016). Thus, the PSDQ Bangla revealed a statistically acceptable sample size and found to be fit to conduct factor analysis. The number of factors of PSDQ Bangla based on eigenvalues obtained from PCA. The first four eigenvalues obtained were 11.54, 4.91, 2.03, and 0.89. The eigenvalues dropped markedly, and below 1, after the

Table 7. PSDQ Bangla (35 items).

Item No.	Item
	Authoritative Domain (20 Items)
1	আমি আমাদের সন্তানকে তার সমস্যা নিয়ে কথা বলতে উৎসাহ দেই।
3	আমি আমাদের সন্তানের বন্ধুদের নাম জানি।
5	আমাদের সন্তানের ভাল কিছুতে আমি প্রশংসা করি ।
8	আমাদের সন্তান কোন কষ্ট পেলে বা হতাশাগ্রস্ত হলে আমি সমবেদনা দেখাই ।
11	আমি আমাদের সন্তানের সাথে স্বচ্ছন্দ ও শিথিল।
12	আমি আমাদের সন্তানকে কোন কাজে অংশগ্রহনের আগে তার আচরণ নিয়ে আমাদের প্রত্যাশা বলি ।
14	আমি আমাদের সন্তানের প্রতি ধৈর্য দেখাই ।
15	আমি আমাদের সন্তানের অনুভূতি ও প্রয়োজনের প্রতি সংবেদনশীল ।
16	নিয়ম কেন মানতে হবে তার কারণ আমি আমাদের সন্তানকে বলি ।
18	আমাদের সন্তান যা কিছু চেষ্টা করে বা অর্জন করে আমি সেটার প্রশংসা করে সন্তানকে বলি ।
20	আমাদের সন্তানকে কিছু করতে বলার পূর্বে তার ইচ্ছাকে আমি বিবেচনা করি।
21	আমি আমাদের সন্তানের বিদ্যালয়ের সমস্যা অথবা উদ্বেগের বিষয়ে সচেতন ।
22	আমি আমাদের সন্তানকে আলিঙ্গন, চুম্বন ও জড়িয়ে ধরে মমতা প্রকাশ করি ।
25	যখন আমাদের সন্তান কোন অসদাচরণ করে তখন আমি তার সাথে আলোচনা করি এবং যুক্তি দেখাই।
28	আমি আমাদের সন্তানের সাথে উষ্ণ এবং অন্তরঙ্গ সময় কাটাই।
29	আমি আমাদের সন্তানকে নিজেকে স্বচ্ছন্দে প্রকাশ করতে উৎসাহিত করি এমনকি যখন তারা বাবা মায়ের সাথে ভিন্নমত পোষণ করে ।
30	সন্তানের ভালো এবং খারাপ ব্যবহার সম্পর্কে আমরা কি অনুভব করি তা আমি আমাদের সন্তানকে ব্যাখ্যা করি ।
32	পরিবারের জন্য কোন পরিকল্পনা তৈরিতে আমি আমাদের সন্তানের পছন্দগুলোকে বিবেচনা করি।
33	আমি আমাদের সন্তানের ব্যবহারের প্রভাব বুঝিয়ে বলি।
35	আমি নিয়মের কারণগুলোর প্রতি জোর দেই।
	Authoritative Domain (9 items)
2	আমি আমাদের সন্তানকে যুক্তির চেয়ে শাস্তি দ্বারা বেশি পরিচালনা করি ।
6	আমাদের সন্তান অবাধ্য হলে আমি তাকে চড় দেই ।
9	যথেষ্ট ব্যাখ্যা না দিয়েই আমি আমাদের সন্তানের সুবিধা কেড়ে নিয়ে শাস্তি দেই ।
10	আমাদের সন্তান খারাপ আচরণ করলে আমি চিৎকার চেঁচামেচি করি।
13	আমাদের সন্তানের উন্নতির জন্য আমি বকা দেই ও সমালোচনা করি।
17	আমি আমাদের সন্তানের অনুভূতির চেয়ে নিজের অনুভূতি নিয়ে বেশি সচেতন ।
26	আমাদের সন্তানের সাথে আমি দ্বিমত পোষণ করি।
31	সামান্য কারণেই আমি হুমকিকে শাস্তি হিসেবে ব্যবহার করি ।
34	আমি চাই আমাদের সন্তান যেন কাজ করে।
	Permissive Domain (6 items)
4	আমি আমাদের সন্তানকে নিয়ম শৃঙ্খলায় রাখতে সমস্যাবোধ করি।
7	সন্তান আমাদের ইচ্ছার বিরুদ্ধে গেলেও আমি মারধর বা বকাবকি করি না।
19	আমি শংকিত যে আমাদের সন্তানকে তার অসদাচারণের জন্য শৃঙ্খলাধীন করতে থাকলে সে তার বাবা-মা কে পছন্দ করবে না ।
23	আমি আমাদের সন্তানের অসদাচরণ উপেক্ষা করি।
24	আমাদের সন্তান কোন কিছু নিয়ে গোলমাল করলে আমি তা দিয়ে দেই।
27	আমাদের সন্তান অন্যদের ব্যাঘাত ঘটালে আমি কিছু বলি না।

Responses are distributed in 5-point Likert scale ranging from 1-5 as follows ১= (ক) কখনো না,   ২= (খ) কখনো কখনো, ৩= (গ) প্রায় অর্ধেক সময়, ৪= (ঘ) প্রায়ই, ৫= (ঙ) সবসময়.
(1 = never, 2 = once in a while, 3 = about half of the time, 4 = very often, 5= always)

third factor, supporting a three-factor solution (Arafat et al. 2016). Component matrix of PSDQ Bangla (Table 6) rotation also revealed three components, namely, authoritative (AV), authoritarian (AN), and permissive (PV). Criterion validity cannot be assessed because of the lack of culturally adapted instruments.

Thus, final PSDQ Bangla retains 35 items in three domains with the distribution of 20 (items 1, 3, 5, 8, 11, 12, 14, 15, 16, 18, 20, 21, 22, 25, 28, 29, 30, 32, 33, and 35) items in authoritative domain, 9 (item 2, 6, 9, 10, 13, 17, 26, 31, and 34) items in authoritarian domain and 6 (items 4, 7, 19, 23, 24, and 27) items in permissive domain (Table 7).

DISCUSSION

Reliability-Internal Consistency

The aim of this study was to assess the psychometric properties of the PSDQ Bangla. Internal consistency of PSDQ Bangla was 0.84 for the total score and subscales ranged from 0.78 to 0.95 (Table 3), which is significant for the construct as the Cronbach's alpha ≥0.70 is considered as acceptable (Arafat et al. 2016; Arafat 2016). The original PSDQ with 62 questions revealed Cronbach's alpha of 0.91 for the authoritative domain, 0.86 for the authoritarian domain, and 0.75 for the permissive domain (Robinson et al. 1995). So, the PSDQ Bangla revealed a nearly similar internal consistency of the original scale. The Turkish validation study revealed that the internal consistency of PSDQ was 0.63, the authoritarian parenting style was 0.71, the authoritative parenting style was 0.84, and the permissive parenting style was 0.38 (Önder and Gülay 2009). The Italian validation study also revealed acceptable reliability in all three domains of the scale, although these were measured by confirmatory factor analysis (Tagliabue et al. 2014). The Chinese validation study revealed that the Cronbach's alpha of each subscale was between 0.62 and 0.86 (Fu et al. 2013). The Lithuanian 32-item PSDQ revealed the Cronbach's alpha for the authoritative domain was 0.85, the authoritarian domain was 0.76, and the permissive domain was 0.58 (Kern and Jonyniene 2012). The Persian study found that the Cronbach's alpha for the authoritative and authoritarian domains was 0.86 and the permissive domain was 0.41 (Morowatisharifabad et al. 2016). The Albanian study found, Cronbach's alpha for the authoritative domain was 0.82, the authoritarian domain was 0.67, and the permissive domain was 0.52 (Ismaili 2015). A recent review found that most of the selected articles (96.23%) showed adequate values for both the authoritative (0.71–0.97) and authoritarian (0.62–0.95) domains with variations in the permissive domain, which showed lower Cronbach's alpha values (0.38–0.89) (Oliveri et al. 2013).

Forms of Validity

Face validity and content validity were systematically assessed and maintained during the development of the research instrument (PSDQ Bangla), which is supported by previous studies (Parsian and Dunning 2009; Arafat et al. 2016, 2017; Arafat 2016; Algin et al. 2018). Expert committee assessed every item of PSDQ Bangla by comparing the translations and back translations and ensured the required equivalences (Beaton et al. 2000; Arafat et al. 2016). Construct validity was assessed by the EFA of the principal component with varimax rotation. The EFA with the principal component with varimax rotation was used to detect the factorial structure in observed measurements. The KMO and Barlett's test of sphericity was applied to the fitness of data for factor analysis based on the sample size, which ensured adequate sample size in the current study statistically. Similar steps of construct validity assessment were found in the Turkish validation study (Önder and Gülay 2009). However, criterion validity of PSDQ Bangla cannot be assessed because of the lack of culturally adapted instruments, which is supported by previous studies (Fu et al. 2013; Arafat et al. 2016, 2017; Arafat 2016). The number of factors of the PSDQ Bangla based on eigenvalues obtained from PCA and a total of three factors were found, which is similar with the original scale (Robinson et al. 1995). Other validation studies also revealed similar three factorial structures, that is, authoritative, authoritarian, and permissive domain, which is also supported by Baumrind's ground work (Robinson et al. 1995; Önder and Gülay 2009; Fu et al. 2013; Olivari et al. 2013; Kern and Jonyniene 2012; Morowatisharifabad et al. 2016)

LIMITATIONS: The evaluation of psychometric properties of the PSDQ Bangla revealed acceptable values that justify the scale to assess parenting style in Bangladesh. To the author's best knowledge, this is the first study to report on the psychometric properties of the Bangla version of PSDQ. However, the PSDQ assesses the responses of parents. Assessing the responses of the children and comparing those with the parents would reveal more complex picture. In the current study, only internal consistency form of reliability was assessed but test–retest and interrater forms of reliability assessment would be better to assess the psychometric property of the instrument. Criterion validity could not be assessed because of the lack of standard culture specific instrument. The study was conducted in Dhaka city covering only three schools, which would complicate the generalizability of the study results as well as the representativeness of sample. More wide inclusion of both schools and children would solidify the current results.

CONCLUSIONS

The 35-item PSDQ Bangla can be a psychometrically reliable and valid tool to use in clinical, research, and primary care settings to deal with different aspects of parenting in Bangladesh. Certainly, it can bolster the mental health care in Bangladesh, especially child psychiatric set up. Regular use of PSDQ Bangla in necessary clinical setting, especially to deal with child psychiatric disorders and research setting, would significantly benefit the clients. Larger studies involving more heterogeneous parents may help to provide a more complete picture of current the state, desired style, and improved ways of parenting to improve the sufferings of parents as well as children. Further scales measuring the parenting styles involving the other stakeholders such as children can be validated. Parenting Authority Questionnaire can be a good instrument to validate further in Bangla to compare and contrast the issues. Other scales measuring different aspects of parenting could be developed, translated, validated, and compared to adapt the most culturally suitable scale. Development of culturally sensitive instruments in Bangla can be an important focus of research.

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CONFLICT OF INTEREST

The study was conducted as partial fulfillment for MD Psychiatry degree. There was no involvement of pharmaceutical or third party in this research.

DECLARATION IF ETHICS

The study was conducted by complying the declaration of Helsinki 1964. Formal permission was obtained on May 09, 2016, from Clyde C. Robinson (Robinson et al., 1995) who developed the questionnaire. Before starting this study, the research protocol was approved by the Institutional Review Board (IRB) of Bangabandhu Sheikh Mujib Medical University (BSMMU) **(BSMMU/2016/10524)**, Dhaka, on October 15, 2016, and the protocol was reviewed on 123th IRB meeting held on October 08, 2016. Different steps of the study were supervised by the Department of Psychiatry, BSMMU.

DECLARATION IF INFORMED CONSENT

Informed written consent was obtained from parents without any influences. Parents were approached through three selected schools with prior permission from the school committee as well as from the headmasters. Data were collected anonymously, confidentiality of the data was ensured adequately, and any unauthorized access to data was not possible.

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AUTHOR'S CONTRIBUTION

The author has the sole contribution in every step of the study.

LIST OF ABBREVIATION

PSDQ: Parenting Style and Dimension Questionnaire
BSMMU: Bangabandhu Sheikh Mujib Medical University
EFA: Exploratory Factor Analysis
IRB- Institutional Review Board
SPSS: Statistical Package for the Social Science
AV: Authoritative
AN: Authoritarian
PV: Permissive

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