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Procedia - Social and Behavioral Sciences 219 (2016) 33 – 40

**Procedia**  
Social and Behavioral Sciences

3rd Global Conference on Business and Social Science-2015, GCBSS-2015, 16-17 December  
2015, Kuala Lumpur, Malaysia

## Confirmatory Factor Analysis on Family Communication Patterns Measurement

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### Abstract

Measurement of Family Communication Patterns is widely used to measure the communication in family practice by many researchers. This measurement was developed by McLeod and Chaffee in 1972 and was later revised by Fitzpatrick and Ritchie in 1994. Family Communication Patterns measurement consists of two dimensions, namely conversation orientation and conformity orientation. The objectives of this study were (i) to evaluate the measurement of Family Communication Patterns by CFA, (ii) to know the reliability of the model, and (iii) to prove the validity of the model. The results showed that the resulting model from measurement of family communication pattern using CFA. The findings also show items and the number of items resulting from the CFA. The resulting model will help next researchers especially in studies related to family communication.

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Peer-review under responsibility of the Organizing Committee of the 3rd GCBSS-2015

**Keywords:** Measurement of Family Communication Patterns, Conversation orientation, Conformity orientation, Confirmatory Factor Analysis, Model.

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### 1. Introduction

Communication within the family is declared as a tool to measure happiness in a family (Ballard-Reisch et al., 2006). Study-related communication in this family has begun in the West by McLeod and Chaffee in 1972. Many studies on communication in the family, for example Chaffee et al. (1971, 1972, 1973) associated with the use of

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media such as television, computers, the Internet and its impact on the behavior of family members (Chan & McNeal, 2003; Bexter et al., 2006). The study of communication in this family continues to grow not only in the West but also among families around the world, including in Malaysia (Narimah, 1993; Aziyah, 2008, 2013; Salleh et al., 2012, Bindi and Md Nor, 2012).

To measure the communication within the family, McLeod and Chaffee has developed a Family Communication Pattern Measurement (Measurement of Family Communication Patterns) (FCP) in 1972. They highlight the two-dimensional pattern of family communication namely concept orientation and socio orientation. Concept-orientation was determine with easy expression of ideas and people's active involvement in discussion and sharing ideas. While the socio-orientation feature was appeared in the form of a triumph for keeping and maintaining the uniform and harmonious relationships with parents (McLeod & Chaffee, 1972). Measurement FCP consists of 14 items, which are 7 items to measure the orientation concept and 7 items to measure the socio orientation. Several studies on communication in the family has adopted this measure (Family Communication Pattern (FCP) by McLeod and Chaffee; for example Narimah (1993), Fujioka and Austin (2002), and Bindih & Md Nor (2012).

In 1990, Ritchie and Fitzpatrick has revised the measurement of family communication patterns. Then they named the Revised Family Communication Pattern Measurement (RFCP). Two dimensions namely socio orientation renamed as orientation conversation and orientation concept was renamed as the orientation of conformity. Items in RFCP consists of 26 items. The orientation of the conversation consists of 15 items and the orientation of conformity contains 11 items. Since these measurements are highlighted, many studies related to family communication apply these measures on a larger scale (eg: Narimah et al., 2008; Aziyah, 2012; Huang, 2010).

Based on previous studies, data obtained from the measurement of family communication patterns were analyzed using SPSS (Statistical Package for the Social Science). Cronbach's alpha shows this family communication pattern measurement is 0.70 or above 0.70. This means that the validity and reliability is acceptable and consistent measurement because it has been tested and used repeatedly.

Though this measurement shows the Cronbach Alpha was high repeatedly in many studies that apply, however, this measure has not yet been tested by other analyzes such as Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). Therefore it is necessary to measure patterns of communication is tested by applying the CFA to achieve the same result. The results of the analysis CFA will strengthen family communication pattern measurement. Thus the objective of this study was (i) to evaluate the measurement of Family Communication Patterns by CFA, (ii) to know the reliability of the model, and (iii) to prove the validity of the model.

## **2. Literature Review**

### *2.1. Family Communication Patterns*

How family members communicate with one another has a variety of enduring influences on family members, including an influence on the self-concept. Different family communication patterns have difference influences on the constructions of children's self-concepts. The change in children's self-concepts from their childhood to adolescence requires parents to adjust their understanding of their children's self-concept so as to maintain successful parent-child relationships. Parents' attitudes toward their parent-child relationships influence adolescents'. Parental attitudes manifest themselves in the family communication patterns that parents create. The Revised of Family Communication Pattern (RFCP) instrument measures two dimensions underlining family communication: conversation and conformity orientation.

### *2.2. Revised Family Communication Pattern*

Family communication patterns were originally conceptualized by mass media researchers McLeod and Chaffee (1972). They were interested in explaining how families create and share social reality, which was defined as a shared perception and evaluation of the social world. Specifically, they measured parenting style based on how parents teach children to process information from mass media. McLeod and Chaffee (1972) proposed two ways in which dyads or families can achieve agreement: socio-orientation and concept-orientation. Socio orientation is the process by which

family members care for their relationships among family members and focus on other members' evaluations while seeking a shared perception among members. A family reaches an agreement by conforming to one particular member, usually a parent, and adopts that member's evaluation as that of the family. In contrast, concept-orientation is the process by which family members focus on an object that is evaluated and care about how family members conceptualize the object. A family reaches an agreement by discussing members' various conceptualizations and arrives at a shared perception of the object.

McLeod and Chaffee (1972) argued that families vary in their preferences for using two strategies to reach an agreement. Thus, children are socialized to process information from mass media differently depending on the family environment. Specifically, children from families who tend to use a socio-orientation rely on their parents or peers to interpret the meaning of mass media messages. Children from families who tend to use a concept-orientation would elaborate on the messages and determine meanings of the messages through their interactions with their parents. McLeod and Chaffee (1972) further argued that families' preferences for using different strategies to create their social reality affect their family communication behaviors. They developed the family communication pattern (FCP) instrument, which captures the underlining strategies of information processing.

Later Ritchie and Fitzpatrick (1994) realized that a process of sharing social reality within a family is not limited to situation in which families' process information from the mass media. Thus, they revised and re-conceptualized the original instrument and developed a more general measurement family communication pattern called, The Revised Family Communication Patterns (RFCP). The RFCP is also based on two dimensions which represent the ways in which families come to create a shared social reality. The concept orientation was re-conceptualized as conversation orientation, and refers to family communication which emphasizes the value of communication among family members. Children from families with a high conversation orientation are socialized to look at objects, issues, or messages, explore potential meanings of them, and discuss the interpretations or meanings of them with others. The second dimension, socio orientation was conceptualized as conformity orientation and refers to family communication which emphasizes conformity to parents. Children are socialized to abide by the meanings that their parents attach to messages. Discussion among family members or having divergent opinions is discouraged.

### *2.3. Dimension of Revised Family Communication Pattern*

Conversation orientation represent how much open family communication regarding a wide range of conversation topics is encouraged in a family. In families high in conversation orientation, family members spend a large amount of time together and communicate frequently and openly. All family members are involved in decision making for family related matters. Children are encouraged to express their opinions, and opinions are evaluated based on their quality, rather than their source. Children are encouraged to elaborate on a variety of information, messages, or opinions and to discuss them with other family members. Parents in families with high conversation orientations believe that open communication is the best way to function as a family and to socialize children (Koerner & Fitzpatrick, 2004). Children are thus socialized to value open communication. On the other hand, in families low in conversation orientation, family members do not share their values and opinions much with other members. There is little discussion on activities that family members engage in as a unit. Family members' opinions are not sought for decision making. Parents do not regard open and frequent family communication as necessary for a family function in general, nor do they feel it is important for children's education or socialization.

Conformity orientation represents the degree to which homogeneity in values, attitudes, and beliefs is emphasized in a family. In families high in conformity orientation, harmony, conflict avoidance, and interdependence are highly valued so as to maintain a high level of homogeneity in values, attitudes, and beliefs in a family (Koerner & Fitzpatrick, 2004). Families high in conformity orientation believe in a more stereotypically traditional family structure, wherein families are cohesive and hierarchical. All decisions are made by the parents, and children are expected to conform to their parents. Parents feel that they have to make decisions for their children. Family schedules are prioritized over individual schedules. Children from high conformity orientation families learn to rely on parents or peers to make decision and not to trust their own decision-making skill. Conflicts are seen as a potential danger to the family, and family members are expected to avoid expressing conflicting opinions. Conversely, families low in conformity orientation value heterogeneity in family members' attitudes and beliefs. Family members are independent and believe

that each individual should grow by seeking their own goals. Individual schedules are considered to be as important as family's schedules.

#### 2.4. Previous Studies Related Family Communication Patterns Measurement

The study by Kelly et al., (2011) on participants' perceptions of family communication norms among college students has adopted the measurement of the Revised Family Communication Pattern (RFCP) by Ritchie and Fitzpatrick (1990). Cronbach's alpha indicated high internal consistency for both scale (Conversation orientation=0.92; Conformity orientation=0.82). The analysis showed that the measurement RFCP acceptable and reliable.

A study conducted by Yuan Huang (2010) on family communication patterns with communication apprehension, and social-communicative over 136 Chinese students at the college in the Mid-West University in the United States. In the study, Huang has applied RFCP instrument for measuring communication within families. Results show that Cronbach alpha values for the orientation of the conversation is 0.75 and the orientation of conformity is 0.87.

A study conducted by Narimah et al. (2008) on the internet and computer usage among farmers adapt RFCP measurement for measuring a communication in families. The analysis showed Cronbach alpha values for the orientation of the conversation is 0.80 and the orientation of conformity is 0.82. Based on Cronbach alpha values that were obtained from previous studies it can be concluded that the Cronbach alpha obtained strengthen RFCP measurement.

### 3. Methodology

This research is quantitative. Distribution of questionnaires used to collect data. Data were collected by using the Cross-sectional collected once at a particular time. Respondents were City teens. Data collected in Kuantan, Kuala Terengganu and Kota Bharu. The respondents were form 4 students of 380 people.

This study uses the instrument Revised Family Communication Pattern by Fitzpatrick and Ritche (1994) to collect data. To measure the communication patterns within the family 5 point Likert scale is used. Starting with the number 1 represents "strongly disagree", number 2 represents the "do not agree", number 3 represents "somewhat agree", number 4 represents "agree" and 5 representing "strongly agree".

Analysis SPSS (Statistical Package for the Social Science) show overall Cronbach Alpha for Family Communication Patterns is 0.89. Meanwhile Cronbach Alpha ( $\alpha$ ) in each dimension which is conversation orientation is 0.80 and orientation of conformity is 0.79. Cronbach alpha coefficient values between 0.6 and 1.0 indicates that a measurement instrument that is good and suitable for use in a study (Zaidatul et al., 2003). Cronbach Alpha ( $\alpha$ ) of each item are as follows.

#### 3.1. Tables

Based on Table 1, Cronbach's alpha ( $\alpha$ ) of each item indicates instrument has validity and reliability reliable. By using SPSS analysis, all items showed high Cronbach's alpha. Therefore, most of the research on family communication pattern will apply to all items in this RFCP measurement to measure the communication patterns within the family. Although SPSS analysis has shown good validity and reliability of measurement RFCP, but this study wanted to see whether the same results would be obtained if the Confirmatory Factor Analysis (CFA) analysis conducted on the data.

Table 1. Cronbach Alpha ( $\alpha$ ) of each item according to measurement of RFCP

No	Items of RFCP	Cronbach Alpha ( $\alpha$ )
<b>Conversation Orientation</b>		
1	In our family we often talk about topics like politics and religion where some person disagree with others	0.80

2	My parents often say something like, “Every member of the family should have some say in family decision.”	0.78
3	My parents often ask my opinion when the family is talking about something.	0.78
4	My parents encourage me to challenge their ideas and beliefs.	0.78
5	My parents often say things like “You should always look at both sides of an issue.”	0.80
6	I usually tell my parents what I am thinking about things.	0.80
7	I can tell my parents almost anything.	0.78
8	In our family we often talk about our feeling and emotions.	0.77
9	My parents and I often have long, relaxed conversations about nothing in particular.	0.78
10	I really enjoy talking with my parents, even when we disagree.	0.77
11	My parents encourage me to express my feelings.	0.77
12	My parents tend to be very open about their emotions.	0.78
13	We often talk as a family about things we have done during the day.	0.77
14	In our family, we often talk about our plans and hopes for the future.	0.78
15	My parents like to hear my child’s opinion, even when I don’t agree with them.	0.77

#### **Conformity Orientation**

16	When anything really important is involved, my parents expect me to obey without question.	0.78
17	In our home, my parents usually have the last word.	0.77
18	My parents feel that it is important to be the boss.	0.77
19	My parents sometimes become irritated with my views if they are different from theirs.	0.76
20	If my parents don’t approve of it, they don’t want to know about it.	0.77
21	When I am at home, I am expected to obey my parents’ rules.	0.77
22	My parents often say things like “You’ll know better when you grow up”	0.80
23	My parents often say things like “My ideas are right and you should not question them”.	0.76
24	My parents often say things like “A child should not argue with adults.”	0.80
25	My parents often say things like “There are some things that just shouldn’t be talked about.”	0.77
26	My parents often say things like “You should give in on arguments rather than risk making people mad.”	0.79

## **4. Findings**

### *4.1. Structural Equation Modeling*

Structural Equation Modeling is deemed as a one of the prominent causal analysis since it is being practice in many field. Because structural equation modeling able to analyze the interrelationship of multiple variables, moderator and indirect effect simultaneously (Zainudin 2015; Hoyle, 1995). In causal analysis, there are two families of structural equation modeling that is actually dependent on the research characteristics which is confirmatory or exploratory approach. One hand is considering as Covariance based structural equation modeling (CBSEM) that is prior to confirmatory approach. Another hand is considering as Variance based structural equation modeling (VBSEM) that is prior to exploratory approach (Hair et al., 2011). In accordance to Ringle (2015), confirmatory approach can be concerned if the analyst has a comprehensive theory that is compatible with the real data. In contrast, VBSEM is appropriate if the analyst have a few theory that using available data sets to guess the random value. In other words, VBSEM is a relevant approach if the analyst interest to operate the misspecified model or for explorative purpose (Lohmoller, 1989; Hair et al., 2013; Dijkstra & Henseler, 2015; Afthanorhan, Awang & Asri, 2015).

As this study is prone on the confirmatory sense, we handle the hypothesized models using CBSEM. Moreover, the assumption stipulated in CBSEM was satisfied in terms of data distribution and sample size requirement (more

than 200 observations). In CBSEM, measurement and structural model must be independently assessed so that the path coefficient of structural model are proper solution (McDonald & Ho, 2002). Means that, measurement model must be considering at the first place to determine the fitness level of each constructs involved in the model. In measurement model perspectives, Confirmatory Factor Analysis (CFA) must be quantified to remove the meaningless items so that the fitness level of measurement model can be satisfied. To do so, the analyst have to attribute the type of modeling based on the literature required whether in the form of first order or second order constructs. In this case, we confirmed to conduct the CFA procedure in the form of second order construct. Because the sub-construct of conversation orientation and conformity orientation are being necessity to measure the main construct of Family Communication Pattern. To add, the utility of second order or multidimensional construct actually allowing the analyst to explain more regarding on the main construct behavior as implemented in the current study (Hulin, 1991; Ones & Viswesvaran, 1996) reproductions of similar nature and translations.

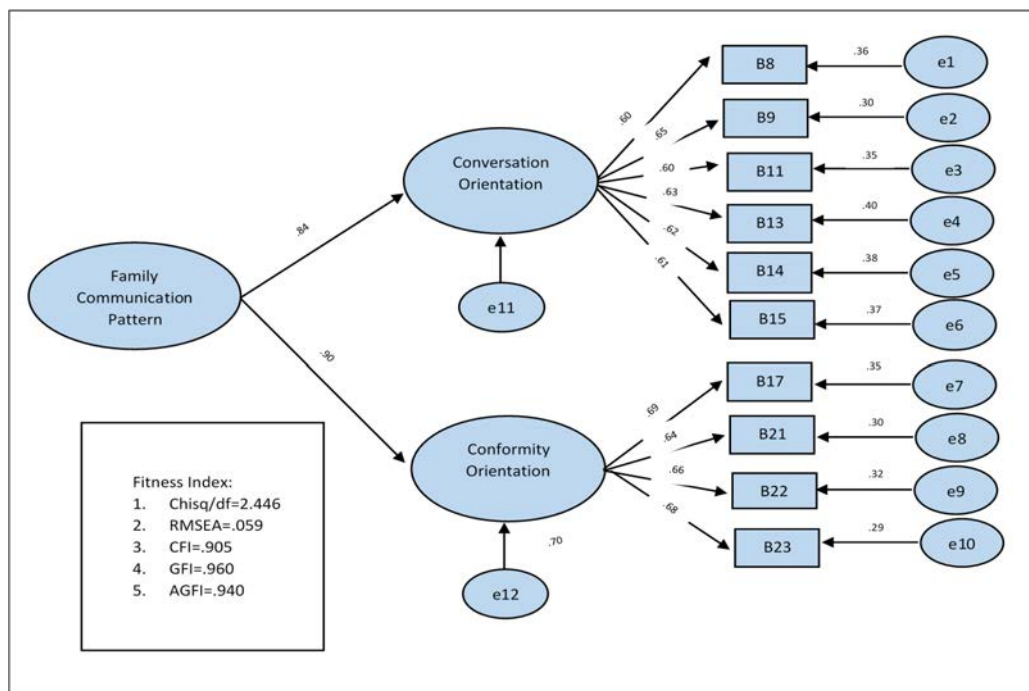


Figure 1. Second Order CFA

Figure 1 shows that main construct of family communication pattern was exerted by other two sub-constructs that is conversation orientation and conformity orientation. In the first place, conversation orientation and conformity orientation have 15 and 11 items respectively. Means that, there are 26 items were included in the model to assess the family communication pattern. CFA in our study was obtained using the powerful estimator that is maximum likelihood estimator. In our analysis, we find out that the second order of family communication pattern was reliable since the standardized loadings are above 0.60 (Conversation orientation = 0.84, Conformity orientation = 0.90).

Generally, the fitness level of family communication construct was satisfied since the fitness required for this model are achieved. As such, there are three categories of fitness index in implementation of CBSEM that is absolute fit, incremental fit and parsimonious fit. In the current paper, we present RMSEA (Absolute fit), CFI, GFI, AGFI (Incremental fit) and Chi-square normalized degree of freedom (Parsimonious fit). Based on the AMOS reported, all the fitness index were indeed valid and thus the measurement model family communication pattern was reliable for

the final analysis. Plus, the indicator loadings in the model are above 0.60. This threshold is chosen based on the previous researchers proposed such as Zainudin (2015), Hair et al., (2006), Bollen & Pearl (2013), Bentler (1990), and Meulener et al., (2003). Thus, the Average Variance Extracted (AVE) was increasing as well since the variance explained in the construct was associated with the standardized loadings. In this case, the remained items for conversation orientation is that B8, B9, B11, B13, B14, and B15 that are seemed ranged from 0.60 to 0.65. On the other hand, the remained items for conformity orientation is that B17, B21, B22, and B23 that is absolute in the range of 0.64 and 0.69. In other words, the items remained in the model is approximate 40% of conversation orientation and 36.4% of conformity orientation.

## 5. Conclusion

Based on these findings it can be stated as follows.

1. Model of family communication pattern measurement could be highlighted and can be used by researchers who study family communication, especially in the future.
2. The resulting Model of family communication pattern measurement contribute to add to the literature either in the country as well as broad.
3. Model of family communication pattern measurement can strengthen family communication patterns measurement (RFCP) of existing

## Acknowledgements

Dr Aziyah Abu Bakar is a senior lecturer at University College Poly-Tech Mara, Malaysia. Her expertise is Human Communication. Family communication is an aspect which her focused in her studies. Many of her publications either in journals, books and articles are centered on family communication and its impact on adolescent development.

Asyraf Afthanorhan is a PhD scholar in Statistics and research consultant at UniSZA International Campus Seri Kembangan. Previously, he ever worked as political researcher under Malaysia Chinese Association (MCA) within one year. Before he started the career, he holds Bachelor in Statistics and Master of Mathematical Science (Statistics). During his studies, he published several journals, manuals, books on statistical knowledge with one of the prominent professor in Malaysia.

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