

# Information and Communication Technologies Use and Its Influence in Family Functioning: Development of Measuring Instrument for the Factors in Hertlein's Multi-Theoretical Model

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## ABSTRACT

The influence of ICT in family functioning is a thrust area to study in which the adoption and changes in family activities are growing every day on par with ICT development. Among the models dealing with the subject, Hertlein's multitheoretical model is the one which contains the combination of factors from three different ICT and family-based theories. There is no measurement items found for this model. So, this research developed the measurement items for all the factors in model. Exploratory and confirmatory factor analysis was done to validate the model. This research also understood the importance of family communication through literature and added that as a sub-factor in the process changes factor and fit well with the existing model. This proves that family communication is one of the major contributor of family process.

## KEYWORDS

Exploratory Factor Analysis, Family Functioning, Hertlein's Model, ICT and Family, Model Extension, Scale Development, SEM Model

## INTRODUCTION

Information and Communication Technology (ICT) plays an extensive role in the everyday activities of a human being such as communication, health, entertainment, public service, finance, education, business, etc. (Scott, 1997; Thulin & Vilhelmson, 2005; Keating et al., 2013; Church et al., 2010; Wang et al., 2015; Carvalho et al., 2016) Among that, the use of ICT in family functioning is at a greater pace (Carvalho et al., 2016) and which helps for family development based on various instances (Dworkin et al., 2019). "Family functioning is understood as a process by which a family meets basic needs, make decisions, establish rules, and achieves goals, while fostering both individual and family development" (Lanigan, 2009; Procentese et al., 2019).

Carvalho et al. (2017) found that the high number of ICT use in families associate with positive family functioning. ICT helps in managing healthy family dynamics and emerging adults face some

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problems compared to kid's. At the same time, parents in the family have a different perception and the secured use of social media in the family depends on the parent's mindset. They strive hard for making social media use positive without affecting family relationships (Procentese et al., 2019). Though social media facilitate communication and reconnection, parents face big difficulties in managing children ICT use and monitor their behaviors especially individualism and isolation (Israel & Eunice, 2019). Contemporary families that have a high number of ICT devices experienced a change in lifestyle and opinion-making (Anderson et al., 1999; McGrath, 2012). With respect to couples in the family, they prefer interpersonal electronic surveillance than direct conversation. They feel that it can satisfy, secure the relationships and online surveillance are easy through ICT (Hertlein & van Dyck, 2020).

In a few families generational divide and difference in preference between parents and children are identified (Kumar & Sriram, 2019). ICT also influenced family cohesion (Lanigan, 2009; Mesch, 2006). In networked households where family members connect with co-family members experience benefits as well as conflicts (Joseph, 2018). It is also proved that ICT helps for transnational families to connect with the family members to bring physical proximity (Stern & Messer, 2009; Bacigalupe, 2011). ICT is also used as a sign of good care between older adults and family members living abroad. The feeling of love, togetherness, bonding was highly sought through ICT devices in transnational families (Ahlin, 2018). This proves that ICT devices have a bigger contribution to all family activities (Blinn-Pike, 2009; Gunuc & Dogan, 2013; Boudreau & Consalvo, 2014; Carvalho et al., 2016).

The domestication of technology in family setup, process, and stages are theoretically developed at various stages. Uses and gratification approach is the one that analyses how people gratify their needs using media and technologies. Ball-Rokeach and De Fleur (1976) propounded the media system dependency theory which states that the media, audience, and society are believed to be dependent on one another to satisfy their goals. Marshal McLuhan who framed technological determinism theory believes that technological inventions always cause cultural change and communication plays a major role in it. He further said that new technology brings changes in routine activities such as eating, dressing, greeting, communication, etc. It has affected the way people think, feel and act. Family ICTs Possession based typology developed by Rompaey, Roe and Struys (2002) stated there are three ways families possess technology. They are slow technological density (Traditional: television and a low number of audio systems), intermediate usage (Medium technological density, more television and audio systems) and high technological density (Possession of new technologies such as internet and email). Domestication of Technology theory talks about the process of bringing the new and unfamiliar technologies into the family setting/context and come under the control of users, raising feelings of excitement and threat (Blinn-Pike, 2009; Haddon, 2006; Mesch, 2006). The theory has four important stages such as appropriation, objectification, incorporation, and conversion. These four stages explained how the new ICT devices entering into the home and influencing the family member's routine life.

In that way, Hertlein's Multi-theoretical model is a framework of how ICT influences family functioning. Family functioning here refers to the two major attributes such as family process and family structure. This theoretical framework which incorporated all the family functioning variables were tested by Hertlein (2012) among the couples. The family functioning factors present in the model has a causal proved connections, but there is no standard measurement instrument was found. Based on the need, this research develops and validates the measurement items for the factors in Hertlein's model.

## **HERTLEIN'S MULTI-THEORETICAL MODEL**

Hertlein's multi-theoretical model states that the ecological influence of ICT usage has led to the changes in the structure and process of the family functioning. This model is based on the integration of three theories. They are family ecology perspective, structural-functional perspective, and interaction constructionist perspective. Family ecology perspective focuses on how environment variable affects

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