

Interprofessional Collaboration in Reversal Theory Science

Amy Marie Poindexter and Kelli Lee Kramer-Jackman
University of Kansas

Reversal theory has a long history of attracting a number of professionally diverse practitioners, educators, and scholars. This paper will discuss interprofessional collaboration in healthcare practice, education, and research; provide an analysis of the known publications utilizing reversal theory in order to determine historical interprofessional activity; and suggest recommendations for supporting interprofessional collaboration in order to advance reversal theory science.

Keywords: Reversal theory, interprofessional collaboration, interprofessional education, interprofessional practice, interprofessional research

Interprofessional collaboration (IPC) occurs when two or more professions function as a team to resolve complex issues and achieve mutual goals (Green & Johnson, 2015). In contrast to a multidisciplinary approach, in which team members work independently and then share information, IPC involves a deeper relationship and requires several unique professions to engage in comprehensive and cooperative decision making in order to provide unified and complementary services (Mitchell, Parker, Giles, & White, 2010).

Benefits of interprofessional collaboration

More than four decades ago, the World Health Organization began advocating for collaboration among health and social care professionals (Vanderbilt, Dail, & Jaber, 2015). However, over the last fifteen years, with the rapid increase in the number of complex patient care situations requiring resources from multiple professions, IPC has become a prominent issue in healthcare and plays a significant role in the delivery of high-quality, patient-centered care (Mahler, Gutmann, Karstens, & Joos, 2014). The positive effects of IPC can be classified in terms of patient, staff, and organizational outcomes (Mitchell et al., 2010). For patients, IPC improves safety and satisfaction of care, access to care, coordination of services, appropriate medication utilization, and disease outcomes (Green & Johnson, 2015). With regard to staff,

IPC limits the demands placed on any one profession and this reduction in self-sufficiency propagates the potential for more innovative, creative, and flexible solutions (Green & Johnson, 2015). In addition, IPC has been shown to decrease conflict among staff and lower turnover rates, resulting in greater job satisfaction and more fulfilling roles for healthcare professionals (Mitchell et al., 2010). In terms of organizational outcomes, IPC can avoid duplication and fragmentation of services, resulting in more cost-effective utilization of resources (Paul & Peterson, 2001). Furthermore, studies have shown IPC can reduce the rate of hospital admissions, length of hospital stays, and emergency department visits, all of which positively impact healthcare resource utilization (Mitchell et al., 2010).

Interprofessional collaboration in practice

The dynamic process in which professionals from multiple healthcare occupations share knowledge and skills in order to develop coordinated solutions that best meet the health and social needs of patients, their families, caregivers, and communities is referred to as interprofessional collaborative practice (IPCP; Manojlovich et al., 2014). IPCP is recognized as a vital part of improving the accessibility, continuity, safety, and value of patient-centered care (Cooper, MacMillan, Beck, & Paterson, 2009). For years, studies have demonstrated how successful IPCP optimizes the expertise of healthcare professionals, allowing for delivery of care which is superior to that of each profession functioning individually (Sullivan, Kivovsky, Mason, Hill, & Dukes, 2015). Reports by the Institute of Medicine generated even greater support for IPCP after identifying the high rate of preventable medical errors and poor quality of care that occur when healthcare professionals practice independently of one another (Clarke & Hassmiller, 2013). As a result, recommendations, many of which have now become mandates,

Amy Marie Poindexter, School of Nursing, University of Kansas; Kelli Lee Kramer-Jackman, School of Nursing, University of Kansas.

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Correspondence concerning this article should be addressed to Kelli Kramer-Jackman, School of Nursing, University of Kansas, 3901 Rainbow Blvd, Kansas City, KS 66160. E-mail: k.kramer.jackman@gmail.com

supporting IPCP have been broached by nearly every health-care profession (Clarke & Hassmiller, 2013).

Interprofessional collaboration in education

To effectively function on IPCP teams, healthcare professionals require interprofessional education (IPE) in which students from two or more health professions study together and learn from and about each other (Green & Johnson, 2015). IPE is aimed at facilitating students from various healthcare occupations to function at the highest level of their education and training while learning how to build interprofessional relationships through collaborative sharing of information and skills (Sullivan et al., 2015). Integration of IPE into health profession curricula fosters collaborative communication and cultivates a philosophy of IPC early on in students' careers; thereby, increasing the likelihood they will trust, respect, and understand the differences between professions (Cooper et al., 2009).

Interprofessional collaboration in research

In order to enhance understanding or discover solutions to problems that are beyond the scope of a single profession, scholars must consider use of interprofessional collaboration in research (IPCR; Green & Johnson, 2015). IPCR occurs when two or more scholars with diverse roles and responsibilities collaborate in order to perform tasks, accomplish mutual goals, and generate new scientific data (Green & Johnson, 2015).

Need for interprofessional collaboration in research.

Research provides for the science and knowledge that are critical for the existence of any health profession (Green & Johnson, 2015). In the best of conditions, research can be an immense undertaking for any one scholar; however, with ongoing political and business demands for financial justification driving changes in the healthcare arena, solutions may not be reached without optimizing the expertise of multiple scholars through the use of IPCR (Tracy & Chlan, 2014). It is widely accepted that IPCR is vital in solving large scale, multifaceted biomedical challenges (Green & Johnson, 2015).

Benefits of interprofessional collaboration in research.

IPCR enhances the quality of research through the use of best evidence from multiple professions. Green and Johnson (2015) discuss benefits of IPCR including that collaborative research creates access to new resources, and the merging of knowledge and expertise enables investigations that are more complex, and perhaps more profound. Opportunities to share the workload can result in increased productivity as more work can be accomplished in less time (Green & Johnson, 2015). Access to funding may be another advantage to IPCR and some large funding agencies are providing additional assistance for collaborative studies while others will only support collaborative projects (Green & Johnson, 2015). In addition, IPCR can eliminate the possibility of duplicating

research; thus, limited resources are not wasted (Green & Johnson, 2015).

Furthermore, when multiple scholars collaborate on research projects, they are better positioned to yield study results as well as distribute the data generated, increasing the likelihood that the results will impact a larger audience (McCallin, 2006). This becomes increasingly relevant when study results can be applied to areas of clinical practice and education (Green & Johnson, 2015). Researched, advanced, and extensively applied, reversal theory (RT) exemplifies the use of IPC in areas of clinically significant research (Apter, 2003). The theory has a long history of attracting a number of practitioners, educators, and scholars who function in professionally diverse roles (Lafreniere, 1993).

Reversal Theory

Created and developed in the mid-1970s by Drs. Ken Smith and Michael Apter, RT is a psychological theory of motivation (Apter, 2003). According to the theory, motivation is crucial to experience; thus, motivation provides the inner framework for behavior, insight, and judgement (Apter, 2001). Emphasis is placed on the individual's interpretation of his or her experience and how the nature and quality of the experience undergoes change over time (Lafreniere, 1993). Utilizing a systematic approach to motivation, emotion, and personality, RT strives to explain why individuals conduct themselves differently in similar situations on different occasions (Thomas, Hudson, & Oliver, 2015).

The theory's approach to any topic begins with the subjective meaning and experience, then works outward into observable behavior, level of functioning, presentation, and interactions (Apter, 2001). According to Apter (2001), there are four domains of experience that can be utilized universally as there are certain characteristics of experience that are "an unavoidable part of everyone's subjective experience at all times" (p. 6). For each of the four domains there are two opposing metamotivational states, or two different ways of experiencing each domain (Apter, 2001). Each pair of metamotivational states is mutually exclusive; at any one time only one metamotivational state from each pair can be functional (Apter, 2001).

An individual's present domain and metamotivational state regulates motivation and the manner in which subjective experiences are interpreted (Thatcher, Kerr, Amies, & Day, 2007). Circumstances, emotions, and thought processes are perceived differently by the individual depending on which of the four domains and corresponding metamotivational states is operational (Thomas et al., 2015). Focusing on certain characteristics of the everyday human experience to rationalize how individuals switch between certain pairs of psychological states based on their interpretation of the experience and motivational style allows the theory to examine

a large variety of particular types of experience and behavior (Apter, 2013).

Methods

Since its inception, RT has been the subject of seventeen international conferences and substantial literature. RT was founded utilizing IPC (Kramer-Jackman, 2015) and for years, RT has incorporated IPC into its use and development (Lafreniere, 1993). Practitioners, educators, and scholars from around the world have been involved in developing and testing the theory (Apter, 2003). The purpose of this quality improvement study was to analyze the known RT publications to determine historical interprofessional activity and make recommendations for supporting IPC that could advance RT science.

Data Collection

RT is represented by a considerable amount of literature including books, research articles and papers, book chapters, and academic dissertations (Apter, 2013). An extensive, but not exhaustive, bibliography from 1975 to February 2015 was obtained via the open access RT Society website (Reversal Theory Society, 2015). It is possible that some RT work has not been reported to the RT society. Approximately 595 publications were retrieved from the RT bibliography (Reversal Theory Society, 2015).

Hersh (2006) describes "Professions" as having: accredited academic programs; professional certification or licensure; specialized skill development and continuing education; organization support such as a society; and a code of ethics or conduct. Though most RT society members have professional psychology education, this unique group is further specialized in a variety of professional areas such as: clinical therapy; sport, exercise, and recreation; business; or environmental design. Other professional members include physicians, nurses, military personnel, or academics.

In order to determine interprofessional collaboration activity, data was gathered for each author's profession. To begin, RT Society conferences were accessed via the RT Society website (Reversal Theory Society, 2013). Abstracts and presentations provided professional affiliation data for some of the authors. In the event the author's professional affiliation could not be ascertained from the RT conference data, a search for the author was conducted on ResearchGate (2015) or Microsoft Academic Search (2015). If a search for the author produced no results, a search for the publication was initiated utilizing CINAHL, EBSCOhost, Ovid Online, PubMed, and Sage Journals electronic databases in an attempt to obtain information regarding the author's professional affiliation.

When the above search processes yielded no results regarding the author's professional affiliation, a Google search

Table 1
Reversal theory publications by profession

	Uni-professional publications		Interprofessional publications	
	Frequency	Percent	Frequency	Percent
Books	18	4.5%	8	4.0%
Articles/papers	149	37.5%	145	73.2%
Chapters	153	38.5%	45	22.7%
Dissertations	77	19.4%	N/A	0.0%
Total	397	100.0%	198	100.0%

Source: Kramer-Jackman (2015)

using the author's name and title of publication was initiated. Google searches with both the author's name and title of publication that failed to produce results were shortened to Google searches using either the author's name or title of publication. Most often, when this search method was employed, a Google search using the author's name provided more results than a Google search utilizing the title of the publication. Once an author's professional affiliation information was obtained, a search for the author was conducted on the professional affiliation's website in order to determine the author's profession. It is noted that professional categorizing in this manner has the potential for errors; however, it was the most practical method available. Only 43 out of 1,057 (0.04 %) author's professional affiliations were not attained using the above methods; one book author, 10 article/paper authors/co-authors, 12 chapter authors/co-authors, and 20 unpublished dissertation or Master's thesis authors.

Data Analysis

Collected data were imported into IBM SPSS, version 21 (IBM Corp, 2012) and reviewed for missing data (Kramer-Jackman, 2015). Missing data that could not be corrected were eliminated from related analysis (Kramer-Jackman, 2015). For those publications with multiple authors, each author was listed independently of the others. Data were then analyzed in order to categorize each author by his or her profession. Categorizing of authors based on their profession allowed for determination of whether RT publications with multiple authors were uni-professional publications (all same profession) or interprofessional publications (multiple professions).

RT publications were represented by four groups: books, articles/papers, book chapters, and dissertations (Reversal Theory Society, 2015). For each group of RT publications, frequency and percentage for uni-professional and interprofessional publications were established. Descriptive (frequency, means, totals, and percentages) for uni-professional, interprofessional, and all known publications were also determined (Kramer-Jackman, 2015).

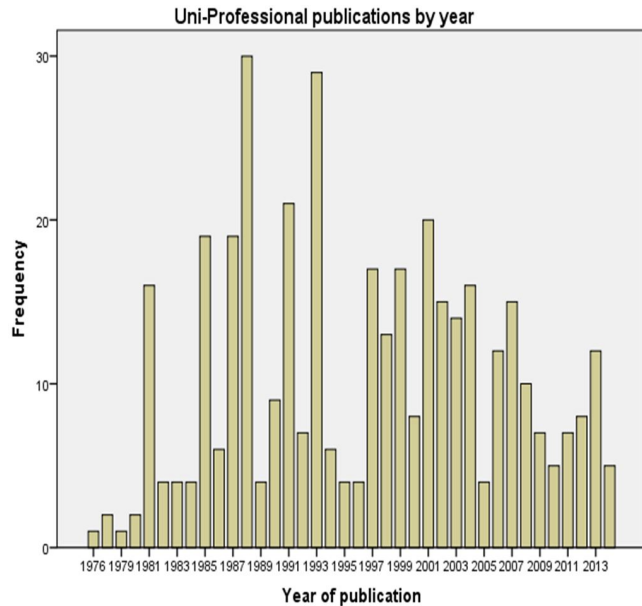


Figure 1. Uni-professional reversal theory publications by year (Kramer-Jackman, 2015)

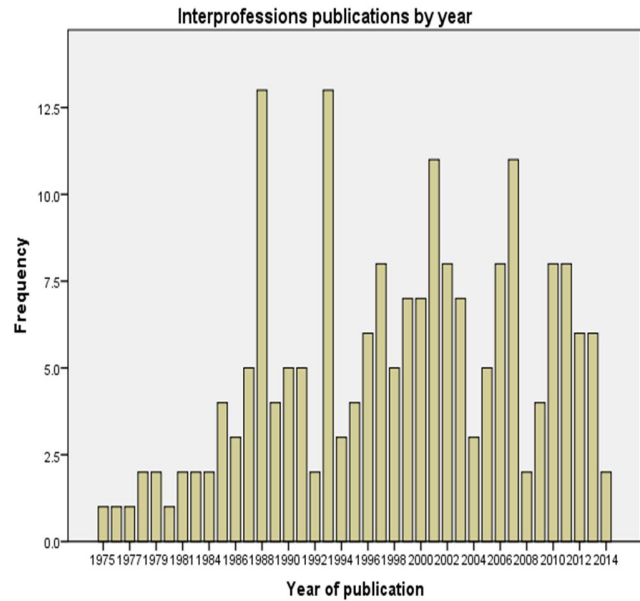


Figure 2. Interprofessional reversal theory publications by year (Kramer-Jackman, 2015)

Results

Out of the 595 publications analyzed, 397 were categorized as uni-professional publications and 198 were considered interprofessional publications (Kramer-Jackman, 2015). Uni-professional publications had frequencies of 18 (4.5%) books, 149 (37.5%) articles/papers, 153 (38.5%) book chapters, and 77 (19.4%) dissertations (see Table 1; Kramer-Jackman, 2015). Interprofessional publications had frequencies of 8 (4.0%) books, 145 (73.2%) articles/papers, 45 (22.7%) chapters, and zero (0.0%) dissertations, as dissertations are traditionally only cited by the doctoral candidate (Kramer-Jackman, 2015). Overall, 66.7% of RT publications were categorized as uni-professional and 33.2% of RT publications were considered interprofessional (Kramer-Jackman, 2015). It is unknown whether there is a gold standard for interprofessional collaboration publication rates; however, it would appear IPC in RT is at least adequate with one-third of RT publications citing authors from multiple professions (Kramer-Jackman, 2015).

To better visualize the interprofessional activity in RT science, uni-professional and interprofessional RT publications were sorted by year of publication (Kramer-Jackman, 2015). Over the thirty-nine year span from 1975 to 2014, uni-professional RT publications, depicted in Figure 1, appear to follow a traditional normal bell curve with a slight skewness (.065) of the tail to the right possibly indicating a slightly greater number of uni-professional publications prior to the mid-way point of 1994-1995 (Kramer-Jackman, 2015). Illustrated in Figure 2, interprofessional RT publications appear to be increasing in numbers with a skewness of $-.284$, indi-

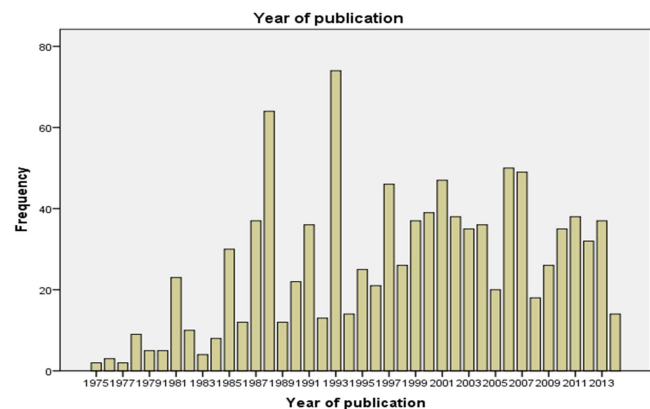


Figure 3. All reversal theory publications by year (Kramer-Jackman, 2015)

cating a slightly greater number of publications after 1994-95 (Kramer-Jackman, 2015). In the years 1988 and 1993, unprofessional and interprofessional RT publication frequencies were at their highest.

Figure 3 does not visually display a clear trend or pattern in the data related to total number of RT publications by year of print (Kramer-Jackman, 2015). However, the negative skewness ($-.219$) shows a slight left tail and slightly greater number of publications before 1994-95. Just as with uni-professional and interprofession RT publications, total RT publication rates were at their highest in 1988 and 1993.

Conclusions and Implications

The results from this study show that RT publications have overall been slowly declining since the mid-1970s, though the results do not speak to the increase or decrease in quality or efforts taken with those publications over time. On a positive note, one-third of those RT publications involved IPC, and those IPC publications have been growing in numbers over the years.

The authors presume that the RT society's overall goal would be not only sustaining membership and the scientific contributions made regarding RT research, practice and education, but growing membership numbers and enhancing RT participation and scientific contributions in the future. In order to focus on attainment of this goal, efforts should be engaged to confirm RT members' goals for the RT society, as well as determining current resources, barriers, needs, and research activities impacting achievement of the RT society goals. Once this assessment has been conducted, plans for enhancing and promoting RT science can be determined.

IPC is woven throughout the history of RT science. Through multiple professions sharing RT awareness, IPC has enhanced RTs application to a vast number of diverse topics. Therefore, IPC is an integral part of RTs growth and should be included during any assessment of RT society goals, resources, barriers, needs, or research activities. It is suggested that society members also consider how to maximize use of current interprofessional collaborative RT resources, such as the international RT conferences and the *Journal of Motivation, Emotion, and Personality*. Both of these IPC resources increase awareness of the theory and draw attention to its success in examining a large variety of topics related to human behavior and experience.

Additionally, to support the professional diversity that currently exists within RT and engage the next generation of RT users, development of resources or tools should be considered that would support networking and community IPC needs. One suggested resource/tool would be to enhance the current RT website to list active RT members' profession, areas of interest, contact information, and current projects. This feature could promote current RT work, and encourage IPC by listing member needs for collaborators with particular skill sets, and consulting or mentorship opportunities. These suggested IPC RT resources require funding, physical effort, and time to be successful, but they can also support the growth of RT science in a proactive way. However, it will be up to the RT society to determine their path to advancing RT.

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