Theory of the Adapting Foster Family (TAFF): Development of a Middle-Range Theory and Mathematical Modeling in Nursing Science

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Abstract

Nursing science has the epistemic advantage of using nursing practice for developing middle-range theories to bridge abstract ideas with clinical research. The Theory of the Adapting Foster Family draws upon extant theories of both Family Systems Theory and Transition Theory while integrating experience from nursing practice. The new theory provides a framework for improving outcomes for children in foster care through greater placement stability. Theory development incorporated literature review, concept exploration, statement synthesis, and mathematical theory modeling to elucidate the interaction between concepts and provide insight to the unique fostering experience.

Introduction

Children in foster care are a highly vulnerable population at risk for negative short- and long-term outcomes (Turney & Wildeman, 2016). They inherently have heavy burdens with high incidences of diagnosed disabilities, mental health issues, adverse childhood events scores, complex medical needs, and behavioral concerns. A stable and safe family environment (a *placement*) in which caregivers are able to meet the needs of the these children is known to improve outcomes (Font & Gershoff, 2020; Rubin et al., 2007). Such an environment can be hard to achieve at times. Children, particularly those with disabilities, experience multiple foster placement settings compounding their vulnerability. Researchers have investigated risk factors for placement instability including behavioral problems and challenges with the system itself. However, these may not be the reasons why a foster parent decides to have a child removed from their home or forgo permanency. These complex factors make it challenging to develop systems or interventions to truly impact and change long-term health outcomes.

Established theories, while important, lack definition of key concepts and statements to inform studies testing interventions that reduce the unequal burden of disease and instability for children who are placed into the foster care system. While new theories may not be necessary to explain every variation in family form, foster families have unique challenges that are not accounted for currently. If they were, we would not so consistently fall short at improving outcomes. This is where the art and practice of nursing allows the profession to leverage abstract theories to inform the development of middle-range theories that are population specific and testable. While theories exist for family systems, none appear to capture the unique characteristics and dynamic interplay in the fostering experience. Previous foster parent research (both qualitative and quantitative) arrives at different conclusions

regarding current foster family training, practices, and expectations (Kaasbøll et al., 2019). However, a stable foster home environment appears to be a critical and predictive component to improve outcomes for children (Gypen et al., 2017). By understanding concepts integral to fostering through a parsimonious theory, researchers can better design theory-informed studies to support family environments for vulnerable children in foster care.

The purpose of this paper is to present the Theory of the Adapting Foster Family (TAFF) by describing the theory construction approach; explicating the theory including its assumptions, key concepts and relationships; and then applying a mathematical modeling approach to inform future testing. This approach transfers the non-linear foster family adapting process to a linear mathematical model, illustrating the potential of mathematical modeling as a knowledge development approach for nursing science.

Methods: Theory Construction Approach

The steps undertaken to construct the TAFF included a literature review, concept synthesis, and statement development. The TAFF was then modelled pictorially and mathematically. Retroduction, as explained by Walker and Avant (2019), was used as the theory construction approach, which uses both deductive and inductive approaches simultaneously. This theory development approach was appropriate because the process was iterative and required numerous reworking of concepts and relationships. Throughout the process, theory evaluation methods were intertwined to aid in producing internal consistency and parsimony. For example, content adequacy as described by Fawcett (2005) was considered to ensure the concepts and propositions were congruent and reflective of both the visual and mathematical model depictions. Philosophical adequacy was considered and reliance on observation and experience was necessary due to the lack of studies directly measuring placement decision-making factors.

The pragmatic adequacy of the new theory was considered during the stages of development to help elucidate how and why a middle range theory was needed for this population.

Literature Review

Current literature regarding placement stability focuses on child risk factors. The risk-focused approach limits potentially effective resiliency-based research strategies. Challenging the status quo and focusing on the strengths of foster families is a novel approach.

Useful family-based theories exist in the literature as well as theories that address transitions and complex systems. Diving deeper into the literature, the philosophical perspective of intermodernism, a view that intersects modernism and postmodernism, became a guiding perspective. It reaches beyond the relativism of post-positivist constructionism and views that knowledge can be gained from both critical thinking of the observed and scientifically measurable phenomena (Reed, 2019). Intermodernism espouses a philosophical belief in a middle path for nursing's ontological and epistemological views and is a pragmatic hybrid form of realism (Reed, 2018). Ethical knowledge, based on nurses' obligation to protect and respect human life, is valued in an intermodernist approach. It asks what is right or wrong and is one of the fundamental ways of knowing in the nursing profession. Improving the health outcomes of child in foster care may, at times be more ethically driven, than measurably efficient.

Roy's Adaptation Model was used as a framework for investigating theories such as Meleis' Transition Theory, Family Systems Theory, and Complex Systems Theory. Several concepts within these current mid-range theories overlap (see Table 1). In Family Systems Theory, families are systems of interconnected individuals, none of whom can be understood in isolation from the system (Bowen, 1972). A child's behavior may seem erratic and unexplained on its own, but after observing family function as a whole, a breakdown in behavior or change in

typical neural functioning becomes clearer to the outside observer. In Complex Systems Theory, health care organizations are commonly evaluated due to the wide array of influencers and systems both within the organization and positioned without. Complex Systems Theory, commonly associated with chaos theory, is a theory of survival, evolution, development, and adaptation (Lorenz & Martin, 1995). Foster families have members that come and go quickly. They are influenced and affected by governmental agencies, biological families, communities, healthcare organizations, and the individual health of members or "units." In Meleis' Transition Theory, transitions, although inevitable, are particularly stressful times for families. With healthy adaptation, foster families can progress to higher levels of complexity and utility (Meleis, 2010). However, if stretched too quickly or too much, they can fracture.

A theory specific to fostering needs unique assumptions, which the literature helped to mold. Assumptions are given statements explaining the nature of the concepts, definitions, purpose, relationships, and structure of a theory. While not testable, they are often "taken for granted" and can be refined through observation and logic (Meleis, 2011). Building upon previous literature, assumptions of the TAFF are:

1. Bio-psychosocial members influence each other, but are also influenced heavily by outside forces such as protective agencies, courts, and biological families

2. A foster family is an open entity where members move in and out of the system quickly and frequently (rapid transitions)

3. The system is not only dynamic but is forced to adapt for survival

4. Trauma, healing, and loss are key themes

5. Health, disease, and disability status affect group dynamics

Concept Synthesis

Concept mapping and concept reformulation were employed to synthesize meaningful concepts within this population. Concept synthesis, as described by Walker and Avant (2019), uses clinical experience as a starting point, then combines observation, quantitative evidence, and literature. Concept mapping is a way to schematically represent a set of concepts or meanings. Potential constructs from the literature were mapped, reformulated, and ultimately new ones synthesized. For example, mining Family Systems Theory was helpful for developing assumptions, but proved key in concept synthesis as it seeks to explain vertical and horizontal complex family dynamics. Concepts from Family Systems Theory included: individuals do not experience emotions separately, the actions and health of individuals affects members of the family, and each individual may contribute to and be affected by the emotions and actions of others. These concepts were reformulated to include additional outside forces including the concept of dynamic and quickly changing membership. Reformulation was also needed to include how the stability of the placement or family membership could be affected by their positive or negative relationship to one another. Concept reformulation—a product of pondering contemporary family structures, financial hardiness, knowledge, skill, and emotional preparedness—led to the idea of secure family environments and the need for an outcome variable of environmental consistency. This process elucidated the following key concepts within the Theory of the Adapting Foster Family: preparedness, hardiness, relationships (also described as relationship development), capital, and membership.

Concept I: Preparedness

Foster family preparedness is the physical, emotional, mental, and peripheral (such as financial, time, and education) readiness for a family to care for a child in foster care and encompasses more than main caregiver education. Attributes of foster family preparedness

include ability to navigate the healthcare system and readiness for sibling acceptance of a new child. Contributors to preparedness include educational classes, professional training, trauma-informed therapist-led family discussions, or skills obtained from one's profession (such as feeling comfortable with oxygen monitors and feeding tubes). The concept of foster family preparedness has potential to promote resiliency and functions as a placement protective factor, thereby minimizing or decreasing placement disruptions.

Literature focuses on the perceived competency of foster parents after state licensing training (Cooley & Petren, 2011) but fails to report the preparedness of the family unit as a whole or when considering the family unit within the context of a child with disabilities in foster care. Research involving foster parent training (which included 16 weeks of training, supervision, and support in behavior management methods) did not show a significant difference in overall placement disruptions between the study and control groups (Price et al., 2008). This finding is potentially attributed to only preparing the main caregiver instead of a family-centered approach in which other members are involved in the preparation process. Family structure is becoming more diverse than ever. A foster family may include married or single head(s) of household along with biological, adopted, or foster siblings, or other adults in the home (grandparents or non-blood-related adults considered part of the core family). The roles of individuals differ from family to family. Therefore, family preparedness must include preparing the family as a whole.

Concept 2: Hardiness

Hardiness is seen as a family characteristic, defined by a family's sense of control over life events and stressors, perception of change as beneficial, active orientation to adapting to stressors, and confidence that they can endure challenges. A family's ability to cope with stress

is affected by their available resources and how they manage these resources. Hardiness is a resource that can diminish the negative effects of stress, and is correlated with increased use of social support. Attributes of hardiness include parenting style, health, and strength of parent and sibling relationships. Contributors include upbringing or available positive parenting mentors. A factor negatively affecting hardiness might be history of previous childhood trauma. By transforming concept of hardiness into variables or empirical indicators, it becomes less abstract and more measurable. The interrelatedness of the concepts of foster family hardiness and preparedness is poorly understood. However, both factors impact placement stability. Variables for family hardiness are measurable indicators such as sense of control, confidence in abilities, and belief that the family unit will survive hardships. The Family Hardiness Index (FHI) measures such variables with questions/statements such as, "We listen to each other's problems, hurts, and fears" and "We strive together and help each other no matter what" (McCubbin et al., 1987).

Concept 3: Relationships

Relationships are the relative connectedness and influence that members have on each other. When positive relationships increase, so does attachment. In Family Systems Theory there is circular causality among and between members. This assumes that any behavior in an interaction is simultaneously influenced by and is an influence for other behaviors in the interaction. Therefore, challenges and struggles affecting one member influences others. Developing relationships and creating stronger supportive bonds between members allows for increased attachment and potentially improved outcomes for a child in foster care (Gardenhire et al., 2019).

Concept 4: Capital

Capital is the combination of the three previous concepts (preparation, hardiness, and relationships). A family's capital is accumulated over time through effort in one of these domains. Capital can also be drawn down in times of need. This intertemporal nature of capital means that past family decisions and events affect future family decisions and opportunities.

Concept 5: Membership

Membership implies the individual people who comprise the family at any given time. Members within a foster family are diverse. They may have different skin color, traditions, and even languages—all within the same foster family. A family includes any member that the family is emotionally invested in and for which they are responsible. This is a key distinguishing feature in foster families versus group homes or institutions, because the new child is seen as a member instead of a resident. This mindset of being a member can aid in the acceptance and attachment between caregivers and siblings. However, in foster families, members still enter and exit the unit rather quickly, transitioning to new family dynamics and establishing a new "normal." These transitions are sometimes expected, but not predictable, causing an underlying feeling of instability and stress. For example, reunification (with a primary parent) and permanency (adoption) may be concurrent court goals. A foster family may be asked to prepare for adoption one week, but then the child is unexpectedly transferred to a kinship home the next week.

Statement Development

Statements regarding the relationship of the concepts (including their nature, direction, significance, and magnitude) within the TAFF were developed using the process of statement synthesis and derivation (discussed further in the mathematical modeling section). Statement synthesis clarifies phenomena of interest by specifying the relationship between concepts. The

two operations of statement synthesis as described by Walker and Avant (2019) and employed for the TAFF were (1) moving from evidence to inferences and (2) generalizing from specific inferences to more abstract ones. The statements were iteratively revised by comparing them with the mathematical modeling and empirical evidence found via the literature. Information gathered from interviews during qualitative inquiries were also included in the process, helping to incorporate personal nursing knowledge of the subject matter. The desired outcome of the statement development process was to define clear statements of the relationship between the concepts with evidence arising from different sources.

Relational statements included in the TAFF are as follows: Family hardiness and family preparedness are positively correlated or associated (nature and direction of the relationship). They might also be sequential. For example, as hardiness increases, families will be better prepared for challenges that arise. This implies directionality such that hardiness influences preparedness. Family relationships are also positively correlated with hardiness, as stronger connections increase the willingness to work through difficulties together. Preparedness may facilitate the development of relationships, which is harder when facing the unexpected. Capital is the family's accumulation of preparedness, hardiness, and relationships. A family that has stored up more capital is sequentially related to family membership, as more capital enables a family to accept and keep more family members or family members with greater challenges.

Theory Modeling

Roy's Adaptation Model served as a guide during literature review, concept development, and statement mapping phases. It was particularly useful during the theory modeling phase as it is a conceptual model within nursing which recognizes the person as a biosocial being, constantly interacting with their changing environment (Roy et al., 2009). In this

model, relationships are interdependent and the adaptations are many times provided, or

inhibited, by members of the family as they influence each other. Additionally, choices made by

individuals, family members, and outside entities (such as primary/bio parents, caseworkers, the

legal system, economic, or social) created forces that push foster families through the adaptation

process, which is hypothesized will affect placement stability.

Visual Depiction

Figure 1 provides a visual depiction of the theory. Initial family units with their capital

(K, indicating the combined resources available to a family) and members (M) are depicted on

the left. As they go through transitions, family units work through placement stability and the

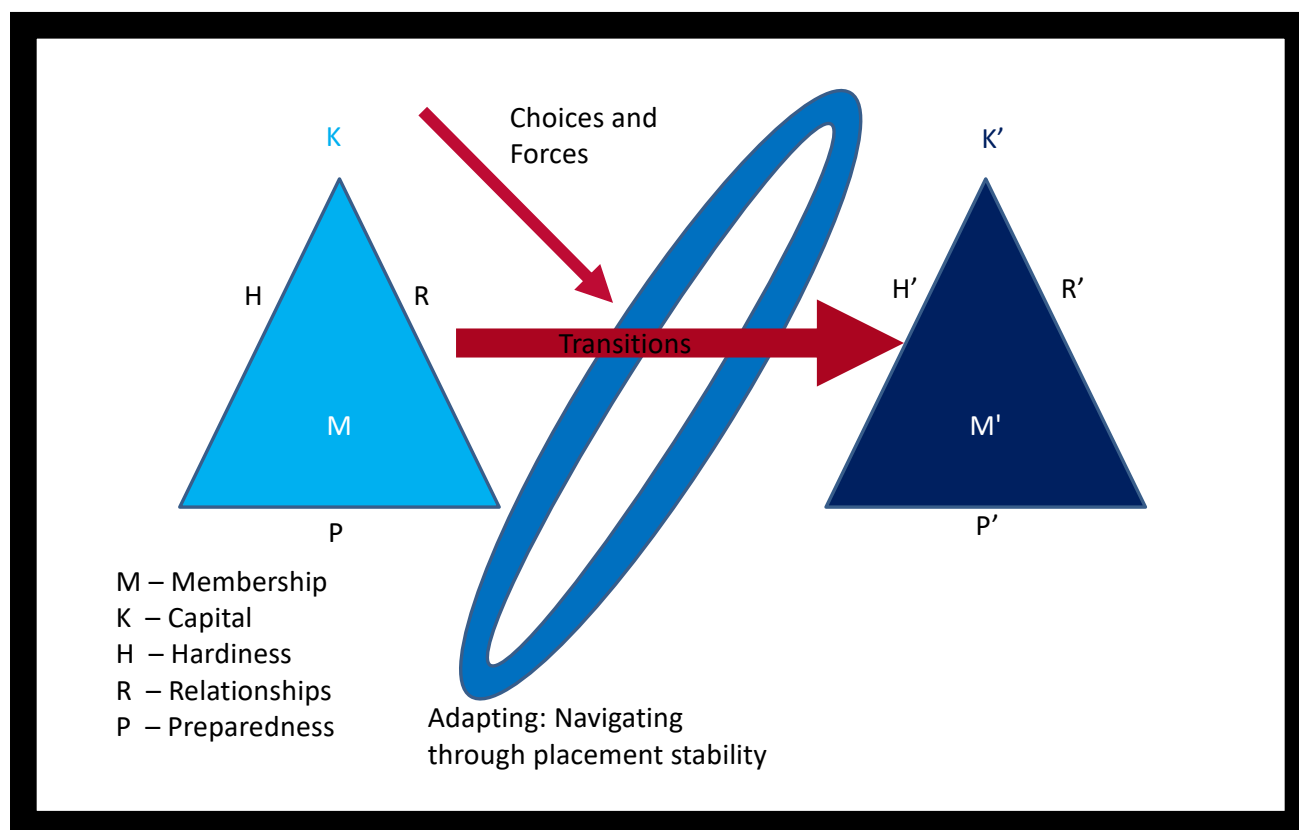choices and forces that are applied upon them. On the right, K prime and M prime represent that

Figure 1. Visual representation of transition processes in the Theory of the Adapting Foster Family.

in a foster family, choices and forces induce changes in capital and family composition.

Members can enter and exit the group at fast rate with little preparation time. Hardiness,

preparedness, and relationships change as they go through the transition process and time.

The construct of navigation through placement stability was informed by interviews that

were analyzed using a grounded theory approach as part of a theory piloting project. The

psychosocial process of foster parents deciding on placement stability occurred in 3 phases (see

Figure 2). These were the Recognition of Limits (antecedents), Weighing Options (the process

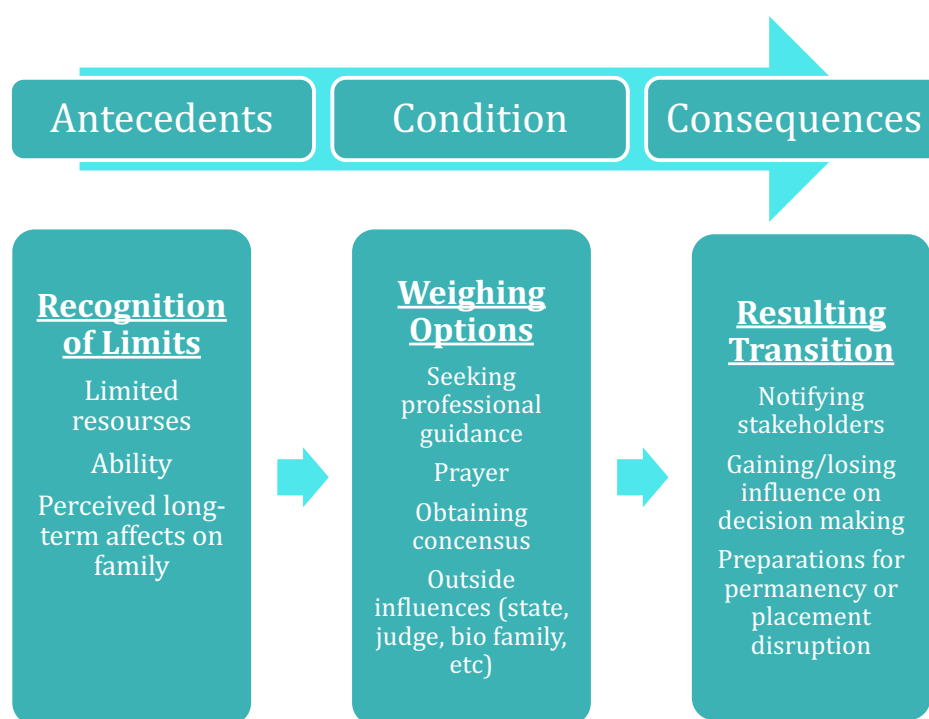itself), and Resulting Transitions (consequences).

Antecedents	Condition	Consequences
Recognition of Limits	**Weighing Options**	**Resulting Transition**
Limited resourses	Seeking professional guidance	Notifying stakeholders
Ability	Prayer	Gaining/losing influence on decision making
Perceived long-term affects on family	Obtaining concensus	Preparations for permanency or placement disruption
	Outside influences (state, judge, bio family, etc)	

Figure 2. Visualization of the decision process as families adapt and navigate through placement choices.

Conclusions from the qualitative pilot project revealed that once a foster parent realized

they were at a critical point in considering the placement of a child, the actual process, defined as

Weighing Options, occurred. Some parents sought professional counseling, consensus with

family members was investigated, and pressures from outside forces (such as requests of

biological family or case workers) were considered. One informant discussed her decision

process to provide a permanent home (adoption) despite extra challenges. She stated, "He just

belonged." In comparison, another stated, "I had to think about how it was affecting my

permanent kids. She (referring to daughter) was scared of him (the child in foster care)." After

the decision was made, foster parents described the process involving several transitions

(Resulting Transitions). Specific individuals needed official notification via the correct forms

that the parent wanted the child moved to a different setting. Informants reported feeling loss and

inability to advocate for the child once the decision was made.

Mathematical Modeling

Derivation was the strategy used for the mathematical modeling of the new theory

because derivation allows theorists to transpose and redefine concepts, statements, or theory

from one field to another (Walker & Avant, 2019). Although rare in nursing, economics

routinely uses mathematical models to depict decision-making by individuals and to analyze how

those decisions interact. We borrow these insights to represent TAFF mathematically, reflecting

family decision making described in Figures 1 and 2. Reformulation, or modification, was used

during this phase of theory development so as to align principles found within economics more

closely with the perspectives valued within nursing. Future research is needed to test the theory

and the modeling approach. Three guiding principles for economic modeling (Platt, 2014) are:

1. *Optimization subject to constraints*. People or families make decisions to best achieve

     their goals, within the limitations of their available resources and knowledge. Economists

     refer to these goals as *utility* (or happiness); in the nursing metaparadigm, the goal would

     be redefined as health or well-being. This goal is represented mathematically with a

     utility function, which represents the decision maker considering the effect of each

alternative and rank them. The constraints indicate that resources are limited, requiring the decision maker to prioritize their use. These are depicted using a *budget constraint*, showing how the resources can be split across potential uses. In nursing, constraint may arise from stressors to well-being, such as disease processes. Optimal decisions mean choosing the best possible alternative, thus maximizing utility or well-being.

2. *Marginal analysis*. Decisions of how to allocate resources can be simplified by considering small adjustments. Rather than considering all the alternatives at once, the decision maker can ask whether doing a little bit more (i.e., *at the margin*) will raise utility. By repeating this process, the decision maker will reach the best alternative.

3. *Equilibrium*. Decisions by one individual can influence outcomes for others. The decisions made by the group are stable (i.e., in *equilibrium*) once all decision makers are secure in their individual decisions. After any change in resources, decision makers will re-evaluate their choices, eventually leading to a new equilibrium. *Comparative statics* are the comparison of the old and new equilibrium, and these are the main prediction of an economic model, which can be tested with data on how people react to changes in their environment.

As applied to represent TAFF, our decision maker is the family unit or head of household, whose goal is to maximize the combined well-being of family members. The family is constrained by its available resources (whether material, emotional, quality time, etc.). We refer to these collectively as *capital*. Capital is initially considered as a single variable that represents all resources (including hardiness, resilience, and relationships — the left triangle in Figure 1), but the model can be deconstructed to consider the three separately.[1]

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[1] With three different resources, there will be three resource constraints. The key modeling decision is how interchangeable the resources are. If perfectly interchangeable (e.g., more hardiness exactly compensates for

An individual's well-being is affected by the amount of resources directed to that individual, labeled c_i. Each individual also has a minimum resource requirement needed for survival, labeled m_i. Thus, each member needs at least $c_i \geq m_i$. The individual's well-being is represented by a function $u_i(c_i - m_i)$. The individual is assumed to be healthier with additional resources, but with less additional impact as more resources are given, known in economics as diminishing marginal utility.[2] Family well-being is the sum of individual well-being, known as *utilitarian social preferences*.

The family can influence its well-being through three levels of family decisions: how to allocate resources among family members (Choices arrow in Figure 1), whether to accept additional members (M' in Figure 1), and what resources to reserve for the future (K' in Figure 1). These decisions are addressed in that order.

Resource Allocation

First, consider a family with a specific set of members and k units of capital available. The family must decide how the capital should be allocated. For illustration purposes, consider two family members who differ in two ways. First, member 2 has a health disparity requiring a greater minimum allocation: $m_2 > m_1$. Thus, member 2 will need more resources to obtain the same well-being as member 1. Second, providing one unit of resources to member 1 requires one unit of capital, while doing so for member 2 requires t units of capital. This transfer cost $t \geq 1$ reflects that assisting some family members will be more challenging than others. Thus, the family's resource budget constraint is written $c_1 + t\, c_2 = k$.

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less resilience), the three constraints can be summed into a single constraint. In the other extreme, if the resources are limited by whichever is least available, then the constraints with relatively more resources can be ignored.

[2] This is satisfied by $\ln(c_i - m_i)$, for example. Formally, $u_i{}'(c_i) > 0$ and $u_i{}''(c_i) < 0$.

After optimization,[3] the mathematical model provides two key predictions. First, all else

equal, the family will devote more resources to member with greater needs. Indeed, if the

transfer cost were $t = 1$, the family would split the capital such that $c_1 - m_1 = c_2 - m_2$,

meaning that both members get the same amount of resources beyond their minimum needs and

hence end up with equal well-being. Second, if the transfer cost to member 2 is higher with $t >$

1, the family tilts the allocation more towards member 1 where the capital has more impact. In

other words, worse outcomes for one family member occur not because of the higher needs per

se, but because it is harder to transfer the necessary resources to that family member.

Membership decisions

Next, consider the decision of a family to change the composition of its membership

(from M to M' in Figure 1). In adding another family member (such as a child in need of foster

care), the family benefits from the well-being of that individual — effectively, they decide to be

emotionally invested in that person. At the same time, the family must rearrange the allocation

of resources among the expanded set of family members. Thus, the family anticipates its optimal

allocation under any family size, choosing whichever enables greater family well-being.

This process is most easily illustrated by comparing a family with one member to a

family with two, though this can be repeated for any family size. Indeed, one can think of

"member 1" as the existing family, while "member 2" is the potential addition to the family, such

as a new foster placement. With the existing family, all resources are allocated there. In adding a

member, the resources must be divided, but the family cares about the well-being of the added

member.[4] Thus, the family will accept a placement if optimized well-being with two members is

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[3] Utility maximization occurs when $u'(c_2 - m_2) = t\, u'(c_1 - m_1)$. For example, the utility function
$\ln(c_i - m_i)$ yields: $c_1 = (k + m_1 - m_2\, t)/2$ and $c_2 = (k - m_1 + m_2\, t)/2t$.
[4] For the example function $\ln(c_i - m_i)$, the family accepts a placement if $\ln(k - m_1) < \ln\big((k + m_1 - m_2\, t)/2\big) + \ln\big((k - m_1 + m_2\, t)/2t\big)$, which is equivalent to $(k - m_1 - m_2\, t)^2 > 4t(k - m_1)$.

larger than optimized well-being with one. Otherwise, the family will reject a placement offer (or disrupt one that was previously accepted).

The model predicts that a family is less willing to accept a placement when the disparity of the new addition is greater (larger m_2). Also, a lower family capital k or greater transfer cost t will typically reduce the willingness to accept a placement as well. Indeed, if m_2 or t are higher or k is lower than originally anticipated, a family may request to disrupt a placement that was previously believed to be optimal.

Savings decisions

The final aspect of the model is to consider the decision on how to allocate capital over time. That is, families can preserve or build up resources for future use (known as *saving* in an economic context), anticipating potential opportunities and preparing for random events that might occur. This can be illustrated in the following two-period extension of the model. The second period proceeds as described above, starting with capital k', which is allocated fully among the optimally-accepted family members.

In the first period, the family makes the same allocation and membership decisions, but start with capital k, which can either be used today or amount s of it can be saved for the next period. Thus, the family's resource constraint becomes $c_1 + t\,c_2 + s = k$. Note that this means that the first period allocation and membership decisions can be solved as before, using capital $k - s$. Saving decisions will optimize family well-being, summed across the two periods.

The two time periods are linked in two ways. First, membership decisions in the first period will persist into the second period, though disruptions or additions can be made at that time. Second, savings for the first period adds to the amount of capital in the second period: $k' = s + r$. Here, r is replenishment of capital that occurs regardless of savings. Beyond the

family's choices, outside forces can alter saved capital or family membership between time periods as well. Some outside forces may be predictable, but others may be random.

If family membership is unchanged between periods, the optimal savings decision ensures that the marginal utility is the same in both periods, setting $s = \frac{k-r}{2}$ so that the family has $\frac{k+r}{2}$ capital available in both periods. If $r > k$, this solution would require borrowing against future capital, but this is not typically feasible if capital takes the form of emotional reserves (and may be limited even for financial assets). In that case, all k is devoted to the first period, while all r is devoted to the second. This can cause a family to reject a placement in the first period while they are later willing to accept the same type of placement.

Note that the scenario does not play out in reverse, where a family accepts a placement but cannot afford to continue it. If the family anticipates a lower capital replenishment tomorrow, it preserves a portion of today's reserves to make possible the same membership in both periods. Thus, the model predicts that a placement disruption always involves some element of surprise from outside forces: e.g., disparities or transfer costs were higher than anticipated, or replenishment was lower.

Discussion and Application to Nursing Practice

Nursing practice can and should influence theory development and interventions to improve the lives of each member in complex families. Foster families are benefitted by the guidance of nurses in the hospital and at home to care for medically complex children. These families are thrust into adapting to a new member, but also into managing complex equipment, medications, and medical regimens. The TAFF is a middle-range theory attempting to best guide our efforts when working with these families and children. Research, health promotion, and

teaching skills for healthy adaption are ways in which nurses might influence and improve lifelong outcomes.

The TAFF has policy and organizational implications. A policy maker (such as a placement *agency*) is assumed to have the goal of maximizing child well-being (meaning u_2 in our model). While this agency does not have direct interest in the existing family well-being (u_1), it would still need to anticipate the family's decisions depicted in the model. For each child in foster care, the agency would seek out the family with the most capital (present and future) for that child: the family is more likely to accept, will offer more resources to the child, and will have more reserves to preserve the placement in the future. This not only maximizes the child's well-being, but also increases the well-being of the accepting family by more than the same placement could have affected any other family.

Beyond this efficient placement of children, the agency may have at least two other policy levers whereby they can influence child well-being and placement permanence. First, the agency could infuse the family with additional capital (in either or both periods). While this could be as financial support, other forms of emotional support, respite assistance, and family-strengthening activities could be equally valuable. Note that any increase in capital is proportionally split among all the family. While only a portion directly assists the child in foster care, the rest still increases family well-being and thereby makes the family more likely to accept and preserve placements.

Second, the agency could work to lessen the transfer cost to the child in foster care. This could involve specialized medical care, training specific to the child's behavioral challenges, and interventions that help build relationships between the child and the rest of the family. Note that this support will redirect more resources to the child, but this does not necessarily reduce

resources for other family members. Particularly when the transfer cost t is initially high, decreasing t will benefit everyone in the family. Effectively, the capital goes farther in addressing the disparities for the child, and thus, leaves more available for everyone. Of course, both types of interventions require resources from the agency, who must also consider the relative costs. Ultimately, the final metric would be which intervention best increases the child's well-being for a given amount of agency expense (of money, personnel, or other resources).

This emerging theory will be useful to nursing practice as it provides the needed framework to identify and advocate for interventions that will best promote well-being for this population. Nurses in hospitals, schools, and within the state foster care organizations could have a profound effect on promoting hardiness and preparing these families. By using the intermodernist perspective and creating a theoretical framework to guide studies that include the dynamic strengths of foster families, nurses could influence and uncover a previously untapped potential for improving the lives of an extremely vulnerable population.

Conclusion

The TAFF was presented here with its unique concepts and relationships pertaining to the fostering experience. Foster families are diverse and experience membership and transitions unlike those described in our current theories. These families are tasked with caring for a complex vulnerable population which requires high levels of interaction with the healthcare and governmental systems. Nursing is concerned with the whole being and wellness, not merely the absence of disease. The TAFF embodies this belief. Using nursing's epistemological authority, we address how experience, knowledge, and theory development practices can be used to create a mid-range theory to guide research and practice.

Moving forward, rigorous theory evaluation of the TAFF is needed in the context of original research. Such research should be designed with rigorous approaches to test the empirical adequacy and to identify the usefulness and fit of the mathematical model in a new context (i.e. nursing science). Theoretical assertions of the TAFF are philosophically and conceptually congruent, but can be operationalized as hypotheses should be further tested within the foster care population. Such research should be conducted with the overarching goal of empowering nurse scholars and other child advocates to improve family functioning, placement stability, and outcomes of children in foster care.

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Table 1: Comparison of Mid-range Theories

Theory	Meleis Transition Theory	Complex Systems Theory	Family Systems Theory	Theory of the Adapting Foster Family
Theorist	Afaf Ibrahim Meleis, (Meleis, 2010)	Aristotle – the sum is greater than the whole of its parts Edward Lorenz in 1972 (Lorenz & Martin, 1995)	Murray Bowen, 1974 (Titelman, 2015)	2021
Paradigm/Roots	Nursing Parenting Caregiving and health transitions (mothers)	Chaos Theory Mathematical influences Biological sciences Organizations	Psychology Families who have members diagnosed with schizophrenia	Nursing Economics Public Health Social Work
System Components	Mothers, eventually human/patient	Units	Parents and siblings	Members
Transitions / Adaptation	Triggered by critical events and changes in individuals or environments. Changes provide opportunities for enhanced well-being and expose individuals to increased illness risks.	Survival, evolution, development, and adaptation. Concerned with environments, organizations, and systems that are complex.	Awareness of how the emotional system functions increasing levels of differentiation. Views the family as an emotional unit and uses systems thinking to describe the unit's complex interactions.	Influenced by internal (family members) and external forces (protection agency, court systems, healthcare systems). Each of these constitute complex systems
Relationships	Improved well-being is an indicator of a healthy transition.	Continual re-organization and emergence	Triangles and intergenerational patterns in families.	Members deeply and meaningfully influence each other. Improved relationships lead to improved outcomes.
Variables	Meanings, expectations, environment, knowledge/skill/ planning level, emotional and physical well-being	Interconnectedness, Feedback loops, Butterfly Effects, Fractals	Connectedness and reactivity make the functioning of family members interdependent	Foster family preparedness, hardiness, relationships, capital, and membership
Applications	Pregnancy, childbirth, parenthood, adolescence, menopause, aging, death, migration, retirement, family caregiving	Atoms, molecules, humans, institutions, corporations.	Mental health of family members. Emotional system is a driving force in clinical problems.	Foster families, including interventions aimed at siblings, to strengthen hardiness.