Int. j. adv. multidisc. res. stud. 2025; 5(3):725-728

Received: 08-04-2025
Accepted: 18-05-2025

International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

Potential Application of the Transtheoretical Model of Behavior Change (TTM) in the Study of the Motivation of Social Entrepreneurs

[1] Dinh Nguyen Khanh Phuong, [2] Bui Tran Huan

[1, 2] The University of Danang, Vietnam-Korea University of Information and Communication Technology, Vietnam

Corresponding Author: **Dinh Nguyen Khanh Phuong**

Abstract

The Transtheoretical Model of Behavior Change (TTM) is a foundational theoretical model developed to explain the personal behavior change process through distinct psychological and behavioral stages. This model has been widely applied across various domains such as public health, psychological counseling, behavioral communication, and more recently, personal finance. This article synthesizes key research applications of TTM to highlight its role in distinguishing between initiation and maintenance motivations and its potential in tailoring interventions based on individuals' readiness to change. Building on that, the paper proposes the integration of TTM into research on social entrepreneurs' motivation—a group characterized by dual-purpose behaviors (social and economic) and development processes tied to enterprise life cycles. Integrating TTM is expected to deepen the analysis of motivational types at each developmental stage and support the design of appropriate interventions to sustain long-term social mission commitment.

Keywords: Transtheoretical Model of Behavior Change (TTM), Stages of Change, Entrepreneurial Motivation, Social Entrepreneurship, Social Enterprise Life Cycle, Behavior Intervention, Motivation Dynamics

1. Introduction

The Transtheoretical Model of Behavior Change (TTM), developed by James Prochaska and Carlo DiClemente in the 1980s, is a theoretical model that has far-reaching influence in applied psychology and public health. TTM describes the process of individual behavior change through six continuous stages – from pre-reflection to termination of old behavior – along with ten psychological-behavioral processes that support the transition. For decades, this model has been shown to be effective when applied to areas such as detoxification, enhanced physical activity, improved nutrition, sexual behavior regulation, psychological counseling, and more recently, personal financial behavior.

Recently, a prominent new research direction is the application of TTM in the field of social entrepreneurs – individuals who pursue social missions through business models, combining personal motivation, social commitment, and long-term adaptability. Similar to health behaviors, the process of starting and developing a social enterprise is cyclical, non-linear, and can be interrupted or restarted. With the ability to analyze behavior in stages and clearly distinguish between initiation and maintenance motivation, TTM is considered a potential theoretical model to study the motivation of social enterprises in each stage of the business development life cycle. On the basis of synthesizing typical applications of TTM, this paper proposes a theoretical basis for integrating this model into the study of behavior and motivation of social entrepreneurs.

2. Transtheoretical Model of Behavior Change (TTM)

The focus of TTM is on the assumption that the process of behavior change is not instantaneous but goes through a series of predictable psycho-behavioral stages. Specifically, the model of dividing the process changes into six stages as follows:

Precontemplation

The individual has no intention of changing his or her behavior within the next six months. They may not be aware that the behavior is problematic or have failed to change, so they no longer have faith in the ability to change.

Contemplation

Individuals begin to consider changing their behavior within the next six months. Although they have noticed the negative consequences of their current behavior, they have not really committed to action.

Preparation
The individual is ready to change their behavior within the next month. They often take preparatory actions such as research, planning, and testing small changes.
Action
The new behavior has been carried out within the last six months. However, the change is still unstable and is susceptible to external factors or recurrence.
Maintenance
The new behavior has been maintained continuously for more than six months. The focus at this stage is on preventing recurrence and reinforcing positive habits.
Termination
The individual no longer wishes to return to the old behavior and is no longer at risk of recurrence. This is considered an ideal stage but not everyone achieves it.
TTM does not assume that the change process is linear. Individuals can move flexibly between stages – forward or backward – depending on the context and experience. For example, a person who has maintained quitting may fall back into the pre-contemplative phase if they experience failure and loss of motivation.
To support the transition between stages, TTM identifies ten psycho-behavioral processes that play a key role in driving change. These processes will be covered in detail in the next section.
Consciousness Raising
The process of acquiring information helps the individual better understand the current behavior and the associated negative consequences. This is usually triggered through education, media, or personal experience.
Dramatic Relief
Intense emotional experiences (e.g., anxiety, anger, fear) are associated with behavior, which in turn promotes the desire to change. This is the process of helping individuals connect emotions with cognition to form initial motivation.
Environmental Reevaluation
The process of reassessing the impact of an individual's behavior on the surrounding environment, including the impact on relatives, the community, or society. This helps individuals develop a sense of social responsibility.
Self-Reevaluation
Reflection on self-image before and after behavior change. This process helps reinforce personal values and self-identification with new positive behaviors.
Self-Liberation
Belief in the ability to change behavior and commitment to concrete action to do so. This is the key process in decision-making and initiating action.
Helping Relationships
Establishing and maintaining positive social relationships (family, friends, professionals, etc.) plays a role in emotional and behavioral support throughout the change process.
Counterconditioning
Replace negative behavior with corresponding positive behavior. For example, instead of smoking when stressed, individuals choose to meditate or walk.
Reinforcement Management
Use reward systems to encourage new behaviors and minimize negative rewards associated with old behaviors.
Stimulus Control
Identify and eliminate environmental factors that lead to negative behavior; at the same time, establish positive signals that support new behaviors.
Social Liberation
Awareness of favorable social opportunities and conditions helps support behavior change, such as public policy, a positive environment, or social movements.

3. Application of TTM in dynamics research
The application of the Transtheoretical Model (TTM) in motivational research has shown significant effectiveness in many fields, especially health, behavioral psychology, media education and personal finance. Below is an overview of typical application areas:

3.1 Changes in health behavior
TTM makes a clear distinction between initiation motivation (e.g., decision to quit) and retention motivation (non-relapse maintenance). Borland *et al*. (2010) [2] point out that the factors that drive the initial attempt to quit (such as the desire to change and the frequency of withdrawal attempts) do not necessarily maintain long-term effectiveness. This highlights the role of interventions designed according to behavioral stages.
In addition, TTM intervention programs – such as sending personalized messages via email or messages tailored to each stage – show higher effectiveness than mass interventions. In particular, subjects in the *Preparation* and *Action stages* require different motivation and strategies than the *Precontemplation* group. In the study of diabetes prevention, the application of TTM significantly improved adherence to a healthy diet.

3.2 Behavioral psychology and therapeutic counseling
In behavioral counseling, TTM serves as a diagnostic tool and personalized intervention design. DiClemente *et al*. (1991) [8] showed that adapting therapy techniques to the behavioral stage significantly increases the effectiveness of alcoholism treatment. The paper by Connors, Donovan and DiClemente (2001) [6] also provides detailed guidance for the application of TTM to each stage of the intervention.
TTM is also highly compatible with the Motivational Interviewing (MI) technique, especially in overcoming hesitation at the *Contemplation* stage (Hettema & Hendricks, 2010) [9]. Other studies (Norcross *et al*., 2011; Petrova *et al*., 2015) [16, 17] also noted the positive role of TTM in individual, group therapy, and for problems such as anxiety, mild depression, or affective behavior disorders in adolescents (Zimmerman *et al*., 2000) [23]. According to DiClemente (2003) [7], relapse should not be seen as failure but as a natural part of the behavior change process.

3.3 Health education and behavior change communication
Many empirical studies have been conducted to test the effectiveness of the Transtheoretical Model (TTM) in changing individual and community behavior, especially in the fields of health and education. For instance, Campbell *et al*. (1994) [5] showed that the implementation of TTM-based interventions has significantly increased the screening rate for cervical and breast cancer. In the field of nutrition, Spencer *et al*. (2002) [21] found that vegetable consumption was markedly improved in people who were in the "preparation" and "action" phases – the two central stages of the behavior change process. Media studies have also recorded positive results, such as Kwak *et al*. (2006) which have demonstrated that the effectiveness of mass media

campaigns is enhanced when the message is tailored to each stage of the audience's behavior. Similarly, Noar *et al.* (2007) [15] assert that behavioral staged stratified media campaigns are more effective than unsegmented mass campaigns. In addition, in the educational setting, Hutchison *et al*. (2009) showed that the application of TTM in school programs helps to effectively prevent risky behaviors such as smoking, obesity, and unsafe sex. These empirical evidences have confirmed the applicability and effectiveness of TTM in designing appropriate behavioral interventions for each subject, contributing to improving the effectiveness of sustainable behavior change in the community.

3.4 Personal financial behavior and consumption

TTM is increasingly applied in the field of behavioral finance to explain decisions related to savings, spending, and financial planning. Xiao, Tang, and Shim (2009) found that college students tend to change their financial behavior through stages similar to the TTM model, with the level of financial proactivity gradually increasing from *Precontemplation* to *Maintenance*. Shockey and Seiling (2004) apply this model in low-income household financial counseling, which improves efficiency by accurately identifying the stage of customer behavior. Other studies (Britt *et al*., 2008; Robb & Woodyard, 2011) show that people in the *Preparation* or *Action* stage are more proactive in seeking support and making financial plans.

Some studies such as Newcomb *et al*. (2006) even use TTM to analyze credit card abuse among young people – emphasizing the role of education focused on groups that are at the stage of problem awareness. The OECD (Atkinson & Messy, 2012) also recommends the integration of TTM into the design of national financial education programs to increase effectiveness through personalization of content according to the level of readiness to change.

4. Basis for considering the application of TTM to the study of social entrepreneurship dynamics

The life cycle models below show that the development journey of social enterprises is non-linear, similar to the logic of TTM – in which the process of behavior change also takes place in stages and is likely to be repeated or interrupted. The special feature of TTM is the ability to distinguish between starting motivation and retention motivation, corresponding to different needs and challenges at each stage of business development. When applied to the study of social entrepreneurship, TTM provides a lens that reflects initiation and social commitment not as a static decision but as a process of dynamic transformation over time. This is especially valuable in explaining why some social enterprises maintain their social mission in the long term, while others tend to reduce their commitment or change their goals.

The concept of the Social Enterprise Life Cycle is used to describe the typical stages of development that a social enterprise goes through – from the stage of conception to scale-up, reaching stability, or model transformation. Lifecycle segmentation not only helps to identify the progress of organizational development but also provides a basis for analyzing the specific types of motivations, challenges, and support needs at each stage.

According to Brakman Reiser and Dean (2018) [3], the life cycle of a social enterprise can be analyzed from a legal perspective with four basic stages:

1. **Formation:** Determine the appropriate legal form and lay the operating platform.
2. **Growth:** Expanding the scale of operations and increasing social impact.
3. **Maturity:** Strengthen organizational capacity and maintain social mission in the long term.
4. **Exit or Transformation:** Transfer of control, merger or restructuring of a business model.

Similarly, the report of Impact Seed & Centre for Social Impact UWA (2024) [12] proposes a five-stage framework for the development of social enterprises as follows:

1. **Ideation:** Forming ideas based on social problem identification.
2. **Start-up:** Establish a business model and start implementing practical activities.
3. **Growth:** Scale up and improve social impact efficiency.
4. **Maturity:** Stable operation, ensuring financial sustainability and social mission.
5. **Transition:** Consider a model transition, merger, or end of operations.

In conclusion, the integration of TTM into social entrepreneurship research not only helps to clarify the dynamics at each point in the development life cycle but also opens up a new theoretical approach in designing intervention programs, coaching and support policies in accordance with the level of readiness for change and social commitment of each group of social enterprises.

5. Conclusion

The Transtheoretical Model of Behavior Change (TTM) has shown its wide applicability and effectiveness in analyzing the process of individual behavior change through the stage structure and specific psycho-behavioral processes. The synthesis of studies in areas such as public health, psychological counseling, behavioral communication, and personal finance confirms that TTM not only helps to identify the level of readiness for change, but also provides a solid rationale for the development of appropriate intervention programs in each phase.

On that basis, the article proposes to expand the application of TTM to the field of social entrepreneurship – a group of subjects with specific behaviors, which is a combination of economic goals and social missions. In the context that social enterprises face complex challenges in the development process, especially in the transitional stages of the life cycle, TTM can serve as an effective analytical tool to clarify the motivation for initiation, maintaining social commitment, etc and the long-term adaptability of entrepreneurs.

The integration of TTM into social entrepreneurship research not only opens up a new theoretical approach to academic works, but also brings practical value in designing policies, training programs and forms of support suitable to the specific needs of social enterprises at each stage of development. Thereby, this model can contribute to promoting sustainable development and strengthening the social mission in the current social startup ecosystem.

6. References

1. Bacq S, Janssen F. The multiple faces of social entrepreneurship: A review of definitional issues based

on geographical and thematic criteria. Entrepreneurship & Regional Development. 2011; 23(5-6):373-403. Doi: https://doi.org/10.1080/08985626.2011.577242
2. Borland R, Yong H-H, Balmford J, Cooper J, Cummings KM, O'Connor RJ, *et al*. Motivational factors predict quit attempts but not maintenance of smoking cessation: Findings from the International Tobacco Control Four Country Project. Nicotine & Tobacco Research. 2010; 12(Suppl 1):S4-S11. Doi: https://doi.org/10.1093/ntr/ntq050
3. Brakman Reiser D, Dean SA. The social enterprise life cycle. In B. Y. Cooper, M. R. M. Verheyde, & H. T. Wilson (Eds.), The Cambridge handbook of social enterprise law (pp. 140–154). Cambridge University Press, 2018. Doi: https://doi.org/10.1017/9781316717447.011
4. Bridle C, Riemsma RP, Pattenden J, Sowden AJ, Mather L, Watt IS, *et al*. Systematic review of the effectiveness of health behavior interventions based on the transtheoretical model. Psychology & Health. 2005; 20(3):283-301. Doi: https://doi.org/10.1080/08870440512331333997
5. Campbell MK, DeVellis BM, Strecher VJ, Ammerman AS, DeVellis RF, Sandler RS. Improving dietary behavior: The effectiveness of tailored messages in primary care settings. American Journal of Public Health. 1994; 84(5):783-787. Doi: https://doi.org/10.2105/AJPH.84.5.783
6. Connors GJ, Donovan DM, DiClemente CC. Substance abuse treatment and the stages of change: Selecting and planning interventions. New York, NY: Guilford Press, 2001.
7. DiClemente CC. Addiction and change: How addictions develop and addicted people recover. New York, NY: Guilford Press, 2003.
8. DiClemente CC, Schlundt D, Gemmell L. Readiness and stages of change in addiction treatment. American Journal on Addictions. 1991; 1(2):23-45. Doi: https://doi.org/10.1111/j.1521-0391.1992.tb00301.x
9. Hettema JE, Hendricks PS. Motivational interviewing for smoking cessation: A meta-analytic review. Journal of Consulting and Clinical Psychology. 2010; 78(6):868-884. Doi: https://doi.org/10.1037/a0021498
10. Hutchison ME, Morris M, Titus L. Application of the Transtheoretical Model in adolescent health education: Implications for school-based programs. Health Education Journal. 2009; 68(3):243-252. Doi: https://doi.org/10.1177/0017896909344384
11. Hutchison SA, Reddy DM, Hale CM. Applying the transtheoretical model to sexual risk behavior prevention in adolescence. Journal of Early Adolescence. 2009; 29(4):458-478. Doi: https://doi.org/10.1177/0272431608322945
12. Impact Seed & Centre for Social Impact UWA. Stages of social enterprise development, 2024. https://impactseed.org/wp-content/uploads/2024/02/Stages-of-Social-Enterprise-Development-Final.pdf
13. Kwak L, Kremers SPJ, van Baak MA, Brug J. A stage-matched intervention to promote physical activity among sedentary employees: A randomized controlled trial. Health Education Research. 2006; 21(4):476-486. Doi: https://doi.org/10.1093/her/cyh074
14. Kwak MS, Khang YH, Kim HJ, Cho SI. Effectiveness of stage-matched interventions to promote smoking cessation in Korean male workers. Journal of Occupational Health. 2006; 48(1):21-27. Doi: https://doi.org/10.1539/joh.48.21
15. Noar SM, Benac CN, Harris MS. Does tailoring matter? Meta-analytic review of tailored print health behavior change interventions. Psychological Bulletin. 2007; 133(4):673-693. Doi: https://doi.org/10.1037/0033-2909.133.4.673
16. Norcross JC, Krebs PM, Prochaska JO. Stages of change. Journal of Clinical Psychology. 2011; 67(2):143-154. Doi: https://doi.org/10.1002/jclp.20758
17. Petrova M, Dale J, Fulford B, Wainwright M. Values-based practice in primary care: Eliciting patients' values. British Journal of General Practice. 2015; 65(631):e374-e380. Doi: https://doi.org/10.3399/bjgp15X685285
18. Prochaska JO, Redding CA, Evers KE. The Transtheoretical Model and stages of change. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), Health behavior and health education: Theory, research, and practice (4th ed., pp. 97–121). Jossey-Bass, 2008.
19. Rimer BK, Glanz K. Theory at a glance: A guide for health promotion practice (2nd ed.). U.S. Department of Health and Human Services, National Cancer Institute, 2005. https://cancercontrol.cancer.gov/sites/default/files/2020-06/theory.pdf
20. Smith BR, Stevens CE. Different types of social entrepreneurship: The role of geography and embeddedness on the measurement and scaling of social value. Entrepreneurship & Regional Development. 2010; 22(6):575-598. Doi: https://doi.org/10.1080/08985626.2010.488405
21. Spencer L, Wharton C, Moyle S, Adams T. The transtheoretical model as applied to dietary behaviour and outcomes. Nutrition Research Reviews. 2002; 20(1):46-73. Doi: https://doi.org/10.1079/NRR200598
22. Spencer L, Wharton C, Moyle S, Adams T. The transtheoretical model as applied to dietary behaviour and outcomes. Nutrition Research Reviews. 2007; 20(1):46-73. Doi: https://doi.org/10.1017/S0954422407745001
23. Zimmerman RS, Olsen CG, Bosworth MF. A 'stages of change' approach to helping patients change behavior. American Family Physician. 2000; 61(5):1409-1416. https://www.aafp.org/pubs/afp/issues/2000/0301/p1409.html