

# A Perspective on the Motivation to Comply Social Norms Construct

Paul Branscum, PhD, RD, FAAHB, FSBM\*

## Abstract

This social norms construct, motivation to comply (MTC), has been labeled problematic. To understand how MTC has been operationalized and measured, a scoping review was conducted. To retrieve articles, the key words ‘Motivation to Comply’ were used in multiple databases (e.g., MEDLINE), from 2009-2021. Twenty-seven manuscripts were identified, and yet according to the author of this study, only 52% measured MTC correctly. Other studies measured MTC as some other psychosocial construct such as attitudes. This article points to the need for standardization in the definition and measurement of the MTC construct.

\*Corresponding author can be reached at: [branscpw@miamioh.edu](mailto:branscpw@miamioh.edu)

## Introduction

Social norms have long been studied as an important determinant of human behavior (Ostrum, 2000). A large portion of health behavior research related to social norms is through the lens of Fishbein and Ajzen’s theory of reasoned action (TRA) and theory of planned behavior (TPB). For example, in a recent review of studies in the social norms field, by far the most utilized models that were published about norms were the TRA/TPB (49.4% of all instances) (Shulman et al., 2017). In another review related to how social norms play a role in physical activity, researchers found 137 articles, of which 125 (91%) used the TPB as the theoretical framework (Kim et al., 2019). The norms construct of the TRA/TPB stems from one’s *subjective norm*, which is defined as:

“...the person’s perception that most people who are important to him think he should or should not perform the behavior in question.” (Fishbein & Ajzen, 1975, p. 302).

Subjective norms can be measured using two methods, with each having a different reason for evaluation. First, reflective indicators can be evaluated to reveal a

generalized latent construct. For example, an item such as...

Most people who are important to me want me to <do behavior x> <Strongly Agree/Strongly Disagree>

...represents one’s *overall* subjective norm about performing a behavior. This measurement approach is effective for understanding an individual’s overall normative pressure to engage in a behavior, however, as Shulman and colleagues (2017) have noted, only evaluating generic referents (e.g., important others), without knowing who the ‘important others’ are, gives little practical information to researchers and practitioners who are interested in developing behavior change interventions. Therefore, the other method Fishbein and Ajzen (2010) suggest relies on formative indicators which identify specific referents that influence one’s subjective norm. That is, an individual’s generalized subjective norms about a behavior are theorized to be determined by considering multiple normative beliefs (nb<sub>i</sub>), or beliefs about important referents (individuals or groups) that want/don’t want the individual to perform a behavior, while also taking into

account the motivation to comply (MTC<sub>i</sub>) for each NB<sub>i</sub>. Examples items that evaluate NB and MTC are as follows:

(NB<sub>1</sub>) “My parents want me to <do behavior x> ...”  
<Strongly Agree/Strongly Disagree>

(MTC<sub>1</sub>) “I want to do what my parents think I should do ...” <Strongly Agree/Strongly Disagree>

To effectively measure important normative beliefs for a population, Fishbein and Ajzen (2010) first suggest conducting an *elicitation of beliefs*, which consists of taking a small sample from a target population and asking open-ended questions such as those listed in Figure 1.

Researchers can then evaluate the responses from the open-ended surveys, and identify prominent referents that are mentioned most often. To understand how specific referents are related to one’s subjective norms, Fishbein and Ajzen (2010) suggest taking the following steps outlined in Figures 2 and 3 (for more information about this method review pages 134-143 in Fishbein and Ajzen (2010)). It should be noted that measuring NB and MTC does not follow traditional conventions for psychosocial variables. Rather than using an index of items to evaluate a latent construct, Fishbein and Ajzen (2010) recommend one item to measure each NB, and one item to measure the NB’s corresponding MTC.

Please list individuals or groups that would approve of or think you should do < behavior x>.

Please list individuals or groups that would disapprove of or think you should not do < behavior x>.

Figure 1. Open-ended questions typically asked to elicit normative beliefs

Step 1: Create an index of reflective (or generalized) subjective norm items, to evaluate the latent construct directed towards a behavior.

Step 2: Create formative subjective norm items, by taking the most common referents from an elicitation of beliefs study, and create single items for normative beliefs (NB) and single-item motivation to comply (MTC) items that correspond with each NB.

Step 3: Using data from a sample/population, multiply each NB and MTC pair, and correlate composite scores to the subjective norms index (developed from the reflective items).

Figure 2. Steps for understanding the relationship between formative and reflective measures of subjective norms

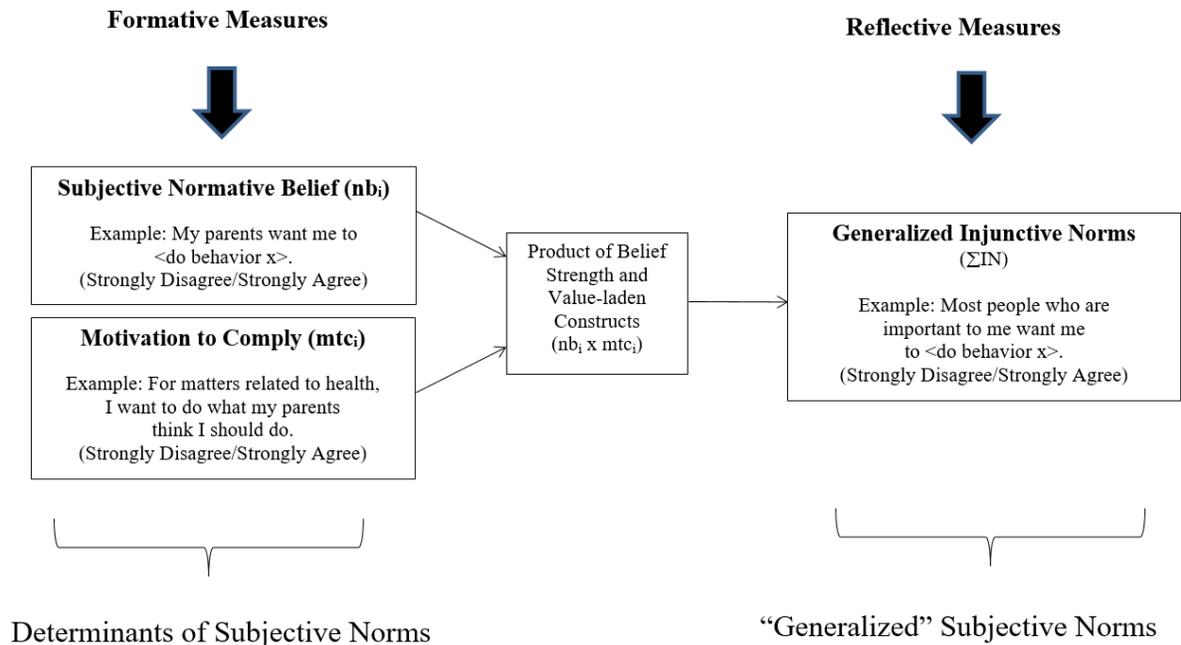


Figure 3. The relationship between formative and reflective measures of subjective norms

Taken together, this approach provides a solution to the problem addressed by Shulman et al. (2017). Despite the advantages of this approach however, a recent review of norms-related literature for physical activity found that among 125 studies in America and Canada using the TPB, 96 studies (77%) used reflective (or generalized) measures of subjective norms, whereas 32 studies (26%) used formative measures, and only 9 studies (7%) included both reflective and formative methods (Kim, Dunn, et al., 2019).

In Fishbein and Ajzen’s (1975) first description of the TRA, they noted that MTC was the least developed construct in the model. In addition, their suggestion for operationalizing and measuring MTC was only tentative, as they conceded a problem was that researchers could interpret the meaning of MTC in different ways. This has been demonstrated in how behavioral theory textbooks define the MTC construct. While Sharma (2017) (p. 104) defined MTC as the “degree to which a person wants to act in

accordance with the perceived wishes of those significant in his or her life,” which follows Fishbein and Ajzen’s characterization, Simons–Morton and colleagues (2011) (p. 108) defined MTC as, “how much the actor values the opinions of particular referents with respect to a particular object or behavior,” which does not appear to follow Fishbein and Ajzen’s original definition. Simons–Morton et al. (2011) further labeled MTC an “ill-named” construct, because they claim MTC should represent how one *values* the wishes of a referent (attitude), rather than how much an individual wants to comply with a referent. Given this context, the purpose of this article was to conduct a scoping review to understand how the MTC is currently being operationalized in health behavior research.

## Methods

This scoping review was written using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)

extension for scoping reviews (Tricco et al., 2018). Databases were used for article retrieval (MEDLINE, Academic Search Premier, CINAHL, Communication & Mass Media Complete, ERIC, Health and Psychosocial Instruments, Health Source: Nursing/Academic Edition, PsycINFO, SocINDEX, and SPORTDiscus), and a boolean search was conducted using the term “motivation to comply.” Articles were included if they were published in English, in a peer-reviewed journal, and between 2009 and 2021. This timeframe was used so only more recent studies were included. While the MTC construct was formally introduced in Fishbein and Ajzen’s 1975 text (Fishbein & Ajzen, 1975) developments and updates in the model have occurred, with the most recent developments being published in their 2010 text (Fishbein & Ajzen, 2010). Upon searching, from 1975 to 2008, 105 manuscripts were yielded, and not used. However, there were 194 manuscripts yielded from 2009 to 2021, showing a significant increase in research on this topic within the last 13 years. Of the 194 articles, 106 were used after removing duplicates. Each article was then evaluated by reading the title and abstract, and afterwards 41 articles appeared promising to include a measure of MTC. After reading the full-text of each article, 30 articles stated measuring the MTC construct, however three did not use the TRA/TPB for a theoretical framework (Figure 4).

To explore the nature of what the MTC item intended to measure among the remaining 27 studies, an example item for MTC was examined from each study by the author of this article. With regard to what MTC should theoretically assess, a proper definition was first established. Motivation has theoretically and statistically been linked to one’s intentions. In Fishbein and Ajzen’s original conception of the TRA, they equated

motivation with intentions (Fishbein & Ajzen, 1975; p. 366)

“Perhaps of greater promise is an approach suggesting that motivation to comply can be interpreted as the person’s *intention* to comply with the referent in question”.

Rhodes et al. (2006), attempted to establish discriminant validity between intentions and motivation, but could not statistically show them as different. Therefore, motivation was defined as an expression of *wanting, planning, or intending* to engage in the compliance behavior. Compliance on the other hand can be viewed as a behavior. The Merriam-Webster dictionary (n.d.) defines *comply* as, “to conform, submit, or adapt (as to a regulation or to another’s wishes) as required or requested.” Therefore, upon reviewing MTC items, the author of the article judged them as having a correct interpretation if they dealt with having an intention/motivation to engage in a compliance behavior.

## Results

Based on the authors evaluation of the 27 studies, 14 (52%) appeared to measure MTC properly, whereas the remaining 13 (48%) studies appeared to evaluate some other concept or construct (Table 1). The following represents examples that did not appear to follow the definition of MTC.

Khanna et al. (2009) evaluated MTC with an item appearing to measure one’s *attitudes* (whether something is important or not) about *imitating* others’ behaviors.

“Doing what other practitioners do is important to me.”

Espetvedt et al. (2013) evaluated MTC with an item appearing to measure one’s *attitudes* about *complying*.

“How important is it to do <what your veterinarian> thinks you should do regarding mild clinical mastitis?”

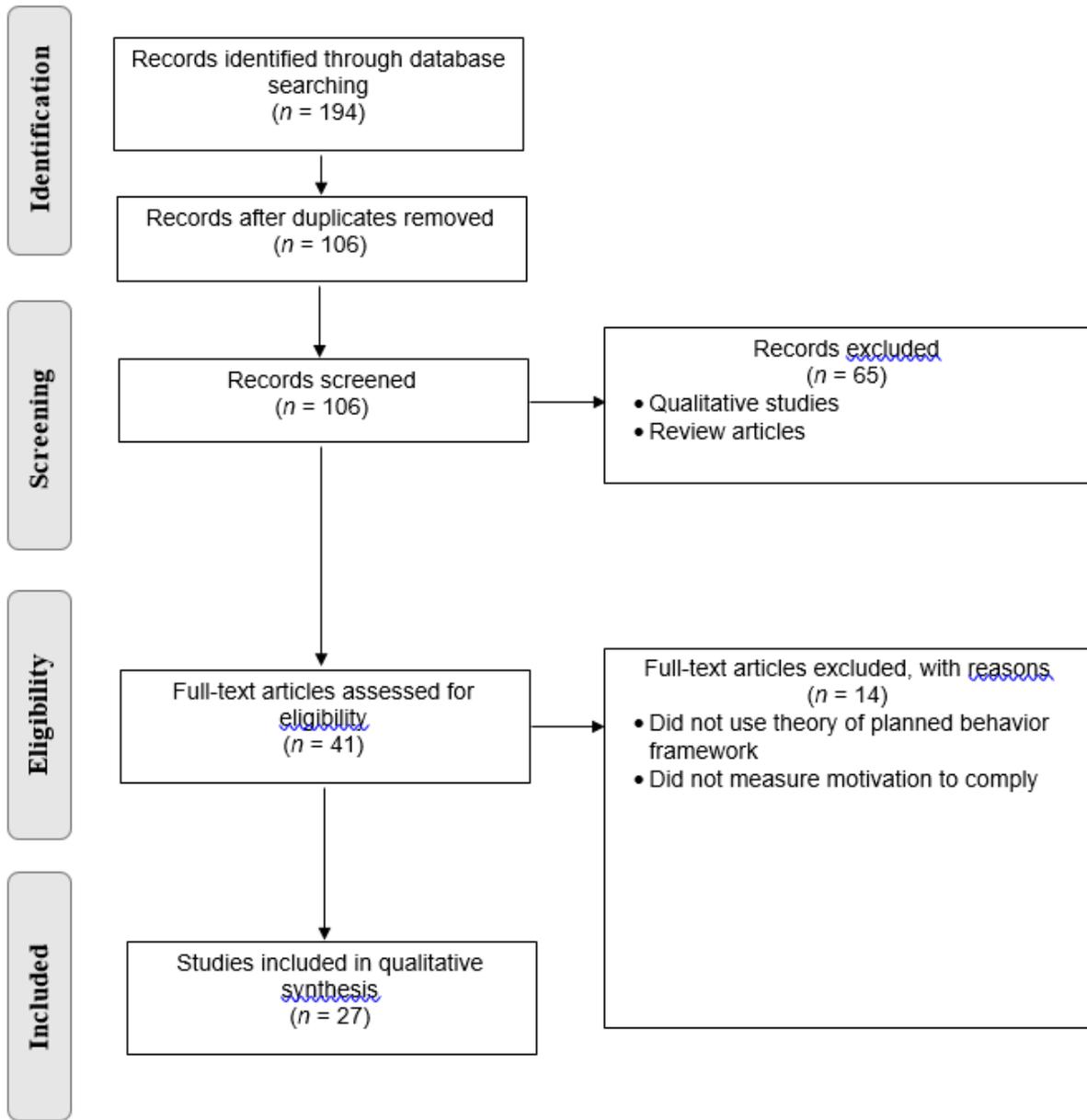


Figure 4. PRISMA Diagram

Table 1

*Example Items for Motivation to Comply*

		<b>Behavior</b>	<b>Example Item Measuring Motivation to Comply</b>	<b>Underlying Construct</b>
1.	Khanna et al., 2009	Measuring BMI in children/adolescents	Doing what other practitioners do is important to me.	Attitudes towards imitating others
2.	Miller et al., 2009	Exercising in a health club	I want to do what <referent> want(s) me to do. (e.g., friends, and spouse)	Motivation to comply
3.	Fogg et al., 2011	Be tested for HIV in the next year.	I generally do what my <referents> think I should do. (e.g., close friends)	Motivation to comply
4.	Iakovleva et al., 2011	Pursuing a career as an entrepreneur	To what extent do you care about what your closest family members think as you decide whether or not to pursue a career as an entrepreneur?	Attitudes towards compliance
5.	Lv et al., 2011	Increase calcium food intake	I am more likely to use calcium supplements instead of calcium rich foods if my friends use calcium supplements.	Motivation to imitate others
6.	Moser et al., 2011	Getting elective breast augmentation among young women	I would want to do what my <referent> think(s) is right. (e.g., parents)	Motivation to comply
7.	Lau et al., 2012	Participate in continuing professional development	If the person who is important to me thinks that I should participate in continuing education, I consider his recommendation matters to me.	Attitudes towards compliance
8.	Zoellner et al., 2012	Sugar-sweetened beverage consumption	How important is it for you to drink the same amount of sugar-sweetened beverages as your friends do?	Attitudes towards imitating others
9.	Araujo-Soares et al., 2013	Regularly use sunscreen SPF C 15 over the next 2 months	When it comes to regularly use sunscreen SPF C 15, how much do you want to do what your <referent> thinks you should do? (e.g., family, and friends)	Motivation to comply
10.	Espetvedt et al., 2013	Contacting a veterinarian to detect mastitis in a lactating dairy cow	How important is it to do what the following persons think you should do regarding mild clinical mastitis? <Your employees/relief workers; your veterinarian)	Attitudes towards compliance
11.	Rahnama et al., 2013	Taking oral contraceptives	<My husband's> approval for taking OC would be important for me.	Attitudes about others' opinions
12.	Newton et al., 2014	Exercise	When it comes to matters of health, I do what my <referent> thinks I should do. (parents, children)	Motivation to comply
13.	Maes et al., 2014	Pursuing a career as an entrepreneur	I would vest importance in the opinion of others before becoming an entrepreneur.	Attitudes about others opinions
14.	Chan et al., 2015	Anti-doping behaviors in sports	How much I want to do what this person thinks I should do? (e.g., my coach, and my teammates)	Motivation to comply
15.	Etcheverry et al., 2016	Choosing a romantic partner	When making decisions about my romantic partners, I am likely to let this person's opinion affect my actions. (e.g., parents, and siblings)	Motivation to comply
16.	Grossoehme et al., 2016	Adherence to daily CF airway clearance (AC) treatments	I want to do what my family thinks I should do about my daily recommended airway clearance	Motivation to comply

Table 1 (continued)

*Example Items for Motivation to Comply*

		<b>Behavior</b>	<b>Example Item Measuring Motivation to Comply</b>	<b>Underlying Construct</b>
17.	Muller et al., 2016	Undergoing prenatal testing	I would undergo prenatal testing if it was important to my doctor/obstetrician/midwife.	Motivation to comply
18.	Athamneh et al., 2017	Quitting water pipe smoking	When it comes to matters of health, I want to do what <my doctor> thinks I should do.	Motivation to comply
19.	Belgiawan et al., 2017	Purchasing a car	How important is <referent> regarding buying a car in the future. (e.g., partner, and close friend)	Attitudes about referents
20.	Simons et al., 2017	LGBT Advocacy behaviors	If I were to sponsor a student group for LGBT students, I would care a lot about what my principal thinks.	Attitudes about others' opinions
21.	Kunst et al., 2018	Party drug use	Regarding party-drug use, to what extent do you want to do what your friends/parents would want you to do?	Motivation to comply
22.	Pillay et al., 2018	Participate in HIV prevention research	I generally do what my <referents> expects of me. (e.g., family)	Motivation to comply
23.	Sherwani et al., 2018	Eating Halal meat	People who are important to me think I should eat Halal meat.	Attitudes towards compliance
24.	Branscum et al., 2019	Sleep and physical activity	In general, I want to do what my <referent> think(s) I should do. (e.g., parents, and friends)	Motivation to comply
25.	Kever et al., 2019	Using sexually explicit material during sex therapy	Acting like other sexologists is important to me.	Attitudes towards imitating behaviors
26.	Kim et al., 2019	Physical activity (PA)	When it comes to regular PA, I want to do what <referents> think(s) I should do'. (e.g., parents, friends, and spouse).	Motivation to comply
27.	Rahimdel et al., 2019	Reducing salt consumption	My <referent's> belief about reducing salt intake is important to me. (e.g., family members)	Attitudes about others' opinions

Rahimdel et al. (2019) evaluated MTC with an item appearing to measure one's *attitudes* about *how others feel*, or their personal beliefs.

"My family member's belief about reducing salt intake is important to me."

Finally, Iakovleva et al. (2011) evaluated MTC with an item appearing to measure one's *attitudes* about a *specific referent*.

"How important is your partner regarding buying a car in the future?"

## Discussion

Understanding how norms influence behaviors, and the behavior change process, represents a critical challenge for health behavior researchers. Social norms are oftentimes studied in the context of theoretical frameworks, most notably the TRA/TPB. As West et al. (2019) have noted, using theories in social and behavior research is important, because they provide frameworks for understanding human behavior, and specify psychosocial and environmental constructs by giving them definitions and boundaries. Unfortunately, the concept of social norms in the field has not been well standardized. This has been demonstrated by others (Chung & Rimal, 2016; Shulman et al., 2017; Rimal & Lapinski, 2015), and I believe this review shows the MTC construct has fallen into a similar pattern. Such inconsistencies should be addressed to bring light to the current state of science, and spark new conversations about how to move the field forward. For example, inconsistencies in the field of behavior change science led to the development of *the behaviour change technique taxonomy* (Michie et al., 2013). Michie et al (2013) noted that given the complex nature of behavior change interventions, it became a challenging task to

replicate and synthesize research in this field. Therefore, they developed a system to categorize 'behavior change techniques,' and gave standard definitions for such techniques that all researchers in the field can utilize, regardless of the behavior being promoted.

One issue that likely contributes to the problem found in this article is the use of *natural language*. Natural language refers to the way we generally discuss theories, using words that may appear to be straightforward, but are in fact ambiguous. Take for example Albert Bandura's recommendation for evaluating self-efficacy, by far one of the most studied constructs in the field of health behavior research (Bandura, 2006). As Bandura posits, a standard self-efficacy survey contains items that are framed in the way, 'I am sure I can <do behavior x>, even when faced with <barrier y>'. While this may appear to be a valid way one can understand how capable an individual would be at performing a behavior, Williams and Rhodes (2016) suggested these assessments are problematic given the ambiguity of words such as 'can'. The word 'can' may be used by some in a literal sense (I cannot lift a car over my head), but can also serve as a proxy for 'want' or 'willingness' (I cannot be active today because I am busy). After giving MTC a strict definition, I believe I have found slight variations in almost half of the instances the construct was measured, making them no longer content-valid measures of the construct. Therefore, efforts are needed that help create consistency in how theoretical constructs are operationalized and measured, by using straightforward, literal language.

There are a few important limitations to this review however, which should be addressed. First, this review only dates back to 2009, and therefore likely missed measures of MTC that were used between 1975 and 2008. Another limitation is that the interpretation of the MTC items were made

solely by the author of this study. A more objective way to evaluate this phenomenon would be to have experts independently code the survey items. Measures of interrater reliability (Cohen's kappa) would further strengthen the results. Finally, a common criticism of the theory of planned behavior is that the constructs are more cognitively based, and that individuals do not process information in the way the value-expectancy paradigm is presented. That is, an individual experiences a belief (e.g., normative belief) and then places value on the belief (e.g., motivation to comply) (see Figure 3 for full reference).

## Conclusions

In conclusion, health behavior researchers interested in how social norms influence behaviors should look to create universal definitions for the constructs they measure, and strive for agreed-upon methods to evaluate the different types of social norms that exist. This can be better achieved if researchers go beyond using natural language; and strict, literal definitions should be promoted to reduce ambiguity.

## Discussion Question

1. In this current issue, I present my viewpoint of how the *motivation to comply* construct has been evaluated, however others may interpret the example items I provided differently. How do you interpret the example items I provided? Do you interpret them as measuring the construct '*motivation to comply*', or a different construct?

## Acknowledgments

Research reported in this publication was supported by the EHS Summer Research Grant Award, which was granted by Miami University. The funding sponsors had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The authors have no conflicts of interest to report, financial or otherwise.

## References

\*Denotes article was used in the scoping review.

\*Araujo-Soares, V., Rodrigues, A., Pesseau, J., & Sniehotta, F. F. (2013). Adolescent sunscreen use in springtime: A prospective predictive study informed by a belief elicitation investigation. *Journal of Behavioral Medicine*, 36(2), 109-123. <https://doi.org/10.1007/s10865-012-9415-3>

\*Athamneh, L., Essien, E. J., Sansgiry, S. S., & Abughosh, S. (2017). Intention to quit water pipe smoking among Arab Americans: Application of the theory of planned behavior. *Journal of Ethnicity in Substance Abuse*, 16(1), 80-90. <https://doi.org/10.1080/15332640.2015.1088423>

- Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares, T. C. Urdan (Eds.), *Self-efficacy beliefs of adolescents*. Information Age.
- \*Belgiawan, P. F., Schmöcker, J. -D., Abou-Zeid, M., Walker, J., & Fujii, S. (2017). Modelling social norms: Case study of students' car purchase intentions. *Travel Behaviour and Society*, 7, 12-25.  
<https://doi.org/10.1016/j.tbs.2016.11.003>
- \*Branscum, P., & Senkowski, V. (2019). Does level of specificity impact measures of motivation to comply? A randomized evaluation. *Translational Behavioral Medicine*, 9(2), 373–379.  
<https://doi.org/10.1093/tbm/iby056>
- \*Chan, D. K. C., Hardcastle, S., Dimmock, J. A., Lentillon-Kaestner, V., Donovan, R. J., Burgin, M., & Hagger, M. S. (2015). Modal salient belief and social cognitive variables of anti-doping behaviors in sport: Examining an extended model of the theory of planned behavior. *Psychology of Sport and Exercise*, 16(B), 164-174.  
<https://doi.org/10.1016/j.psychsport.2014.03.002>
- Chung, A., & Rimal, R. N. (2016). Social norms: A review. *Review of Communication Research*, 4, 1-28.  
<https://doi.org/10.12840/issn.2255-4165.2016.04.01.008>
- \*Espetvedt, M., Lind, A. -K., Wolff, C., Rintakoski, S., Virtala, A. -M., & Lindberg, A. (2013). Nordic dairy farmers' threshold for contacting a veterinarian and consequences for disease recording: Mild clinical mastitis as an example. *Preventive Veterinary Medicine*, 108(2-3), 114-124.  
<https://doi.org/10.1016/j.prevetmed.2012.07.014>
- \*Etcheverry, P. E., & Agnew, C. R. (2016). Predictors of motivation to comply with social referents regarding one's romantic relationship. *Personal Relationships*, 23(2), 214-233.  
<https://doi.org/10.1111/pere.12121>
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Addison-Wesley.
- Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach*. Psychology Press.
- \*Fogg, C. J., Mawn, B. E., & Porell, F. (2011). Development of the Fogg Intent-to-screen for HIV (ITS HIV) questionnaire. *Research in Nursing & Health*, 34(1), 73-84.  
<https://doi.org/10.1002/nur.20412>
- \*Grossoehme, D. H., Szczesniak, R. D., Mrug, S., Dimitriou, S. M., Marshall, A., & McPhail, G. L. (2016). Adolescents' spirituality and cystic fibrosis airway clearance treatment adherence: Examining mediators. *Journal of Pediatric Psychology*, 41(9), 1022-1032.  
<https://doi.org/10.1093/jpepsy/jsw024>
- \*Iakovleva, T., Kolvereid, L., & Stephan, U. (2011). Entrepreneurial intentions in developing and developed countries. *Education+Training*, 53(5), 353-370.  
<https://doi.org/10.1108/004009111111147686>

- \*Kever, E., Van den Broucke, S., & Hack, D. (2019). The use of sexually explicit material by Belgian sexologists. *Sexual and Relationship Therapy, 35*(2), 195-209.  
<https://doi.org/10.1080/14681994.2019.1659949>
- \*Khanna, R., Kavookjian, J., Scott, V. G., Kamal, K. M., Miller, L. -A. N., & Neal, W. A. (2009). Using the theory of reasoned action to determine physicians' intention to measure body mass index in children and adolescents. *Research in Social and Administrative Pharmacy, 5*(2), 170-181.  
<https://doi.org/10.1016/j.sapharm.2008.06.006>
- Kim, J., Dunn, E., Rellinger, K., Robertson-Wilson, J., & Eys, M. (2019). Social norms and physical activity in American and Canadian contexts: A scoping review. *International Review of Sport and Exercise Psychology, 12*(1), 26-48.  
<https://doi.org/10.1080/1750984X.2017.1354229>
- \*Kim, J., Eys, M., Robertson-Wilson, J., Dunn, E., & Rellinger, K. (2019). Subjective norms matter for physical activity intentions more than previously thought: Reconsidering measurement and analytical approaches. *Psychology of Sport and Exercise, 43*, 359-367.  
<https://doi.org/10.1016/j.psychsport.2019.04.013>
- \*Kunst, L. E., & Gebhardt, W. A. (2018). Prevalence and psychosocial correlates of party-drug use and associated problems among university students in the Netherlands. *Substance Use & Misuse, 53*(12), 2077-2088.  
<https://doi.org/10.1080/10826084.2018.1455700>
- \*Lau, C. M., & Chen, Q. (2012). Modeling participation intention of adults in continuing education—a behavioral approach. *International Education Studies, 5*(3), 161-177.  
<https://doi.org/10.5539/ies.v5n3p161>
- \*Lv, N., & Brown, J. L. (2011). Impact of a nutrition education program to increase intake of calcium-rich foods by Chinese-American women. *Journal of the Academy of Nutrition and Dietetics, 111*(1), 143-149.  
<https://doi.org/10.1016/j.jada.2010.10.005>
- \*Maes, J., Leroy, H., & Sels, L. (2014). Gender differences in entrepreneurial intentions: A TPB multi-group analysis at factor and indicator level. *European Management Journal, 32*(5), 784-794.  
<https://doi.org/10.1016/j.emj.2014.01.001>
- Merriam-Webster. (n.d.) *Comply*. In Merriam-Webster.com dictionary. Retrieved April 9, 2020, from <https://www.merriam-webster.com/dictionary/comply>
- Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., Eccles, M. P., Cane, J., & Wood, C. E. (2013). The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: Building an international consensus for the reporting of behavior change interventions. *Annals of Behavioral Medicine, 46*(1), 81-95.  
<https://doi.org/10.1007/s12160-013-9486-6>
- \*Miller, W. C., & Miller, T. A. (2009). Body weight and perceived social pressure to exercise at a health club. *American Journal of Health Behavior, 33*(5), 494-503. <https://doi.org/10.5993/ajhb.33.5.2>

- \*Moser, S. E., & Aiken, L. S. (2011). Cognitive and emotional factors associated with elective breast augmentation among young women. *Psychology & Health, 26*(1), 41-60.  
<https://doi.org/10.1080/08870441003681299>
- \*Muller, C., & Cameron, L. D. (2016). *It's complicated* – Factors predicting decisional conflict in prenatal diagnostic testing. *Health Expectations, 19*(2), 388-402. <https://doi.org/10.1111/hex.12363>
- \*Newton, J. D., Newton, F. J., & Ewing, M. T. (2014). The dimensional salience solution to the expectancy-value muddle: An extension. *Psychology & Health, 29*(12), 1458-1475.  
<https://doi.org/10.1080/08870446.2014.950657>
- Ostrom, E. (2000). Collective action and the evolution of social norms. *Journal of Economic Perspectives, 14*(3), 137-158.
- \*Pillay, D., & Wassenaar, D. R. (2018). Racial differences in willingness to participate in HIV prevention clinical trials among university students in KwaZulu-Natal, South Africa. *South African Journal of Psychology, 48*(1), 112-128.  
<https://doi.org/10.1177/0081246317708094>
- \*Rahimdel, T., Morowatisharifabad, M. A., Salehi-Abargouei, A., Mirzaei, M., & Fallahzadeh, H. (2019). Evaluation of an education program based on the theory of planned behavior for salt intake in individuals at risk of hypertension. *Health Education Research, 34*(3), 268-278.  
<https://doi.org/10.1093/her/cyz007>
- \*Rahnama, P., Hidarnia, A., Shokravi, F. A., Kazemnejad, A., Montazeri, A., Najarkolaei, F. R., & Saburi, A. (2013). Users of withdrawal method in the Islamic Republic of Iran: Are they intending to use oral contraceptives? Applying the theory of planned behavior. *Eastern Mediterranean Health Journal, 19*(9), 782-787.
- Rhodes, R. E., Blanchard, C. M., Matheson, D. H., & Coble, J. (2006). Disentangling motivation, intention, and planning in the physical activity domain. *Psychology of Sport and Exercise, 7*(1), 15-27.  
<https://doi.org/10.1016/j.psychsport.2005.08.011>
- Rimal, R. N., & Lapinski, M. K. (2015). A re-explication of social norms, ten years later. *Communication Theory, 25*(4), 393-409. <https://doi.org/10.1111/comt.12080>
- Sharma, M. (2017). *Theoretical foundations of health education and health promotion*. Jones & Bartlett Publishers.
- \*Sherwani, M., Ali, A., Ali, A., Hussain, S., & Zadrán, H. G. (2018). Determinants of Muslim consumers' Halal meat consumption: Applying and extending the theory of planned behavior. *Journal of Food Products Marketing, 24*(8), 960-981.  
<https://doi.org/10.1080/10454446.2018.1450173>
- Shulman, H. C., Rhodes, N., Davidson, E., Ralston, R., Borghetti, L., & Morr, L. (2017). The state of the field of social norms research. *International Journal of Communication, 11*, 1192–1213.
- \*Simons, J. D., Hutchison, B., & Bahr, M. W. (2017). School counselor advocacy for lesbian, gay, and bisexual students:

- Intentions and practice. *Professional School Counseling*, 20(1a), 29-37.  
<https://doi.org/10.5330/1096-2409-20.1a.29>
- Simons-Morton, B., McLeroy, K., & Wendel, M. (2011). *Behavior theory in health promotion practice and research*. Jones & Bartlett Publishers.
- Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Chang, C., McGowan, J., Stewart, L., Harling, L., Aldcroft, A., Wilson, M. G., Garritty, C., Lewin, S., & Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, 169(7), 467-473.  
<https://doi.org/10.7326/M18-0850>
- West, R., Godinho, C. A., Bohlen, L. C., Carey, R. N., Hastings, J., Lefevre, C. E., & Michie, S. (2019). Development of a formal system for representing behaviour-change theories. *Nature Human Behaviour*, 3(5), 526-536.  
<https://doi.org/10.1038/s41562-019-0561-2>
- Williams, D. M., & Rhodes, R. E. (2016). The confounded self-efficacy construct: Conceptual analysis and recommendations for future research. *Health Psychology Review*, 10(2), 113-128.  
<https://doi.org/10.1080/17437199.2014.941998>
- \*Zoellner, J., Estabrooks, P. A., Davy, B. M., Chen, Y. -C. Y., & You, W. (2012). Exploring the theory of planned behavior to explain sugar-sweetened beverage consumption. *Journal of Nutrition Education and Behavior*, 44(2), 172-177.  
<https://doi.org/10.1016/j.jneb.2011.06.010>