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The Effects of an Academic Values Clarification Exercise on the Academic Performance of
College Students

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Abstract

Values exploration exercises, in which individuals are typically asked to rank order their values and describe values that are most important to them, have been used for many purposes including reducing the racial achievement gap in academic performance (Cohen, Garcia, Apfel, Maser, 2006), increasing acceptance of health related issues (Harris & Napper, 2005), and increasing academic success (Chase, Housmanfar, Hayes, Ward, Vilaradaga, & Follette, 2013). However, little research has addressed the mechanism or mechanisms through which values clarification exercises impact outcomes, particularly academic achievement. This paper analyzes values clarification exercises used in educational settings during the 1970s and the roles that values clarification exercises play in contemporary behavior therapies. Additionally, the authors suggest future research for this area and describes a recently conducted pilot study that examined the effects of values clarification on college students' behaviors related to academic achievement. The authors report on these trends of the pilot study and provide interpretations for potential results and future research to test these hypotheses.

Keywords: Values clarification, academic performance, higher education, retention

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The Effects of an Academic Values Clarification Exercise on Academic Performance of College Students

One current topic that merits further exploration is the role that students' academic values play in determining their propensity to engage in behaviors related to academic success. Specifically, values and values clarification, with regard to education need to be further explored. This paper highlights current research on higher education retention rates and the negative impacts caused by low retention. It will address the current research literature on values clarification exercises, and their utility in academic and clinical settings as well as provide a behavioral definition of values. In addition, this paper will discuss possible future directions for research on values clarification as well as ways that values clarification exercises may be used to enhance critical outcomes for students and academic institutions. These outcomes include, among others, students' academic performance, institutional retention rates and students' levels of satisfaction with their experiences in higher education. This paper will also describe the preliminary findings of a pilot study that examines the effects of a values clarification exercise on academic performance of college students.

Higher Education Retention Rates

Attrition in higher education has been a major concern for universities, and as more Americans elect to attend colleges (Southern Regional Education Board, 2012) concern related to attrition is likely to continue to grow as a topic of discussion. A recent national study by the National Center for Education Statistics (NCES) has found that in 2004, about 58% of all first-time U.S. students attending a four-year college full time and seeking bachelor's degrees received their bachelor's degree at that same college within six years. (NCES, 2012). In

addition, about 16% of students who began at a post-secondary institution in 2003-2004 had left college by 2004 without completing a degree or certificate program. There are various reasons for poor retention rates in higher education, and many organizations are devoted to examining the effects of attrition in higher education along with developing ways to improve retention rates (e.g. National Center for Educational Statistics, The Educational Policy Institution, and The U.S. Department of Education). Low retention rates may be cause for concern for universities, as student failure to complete degree programs may be viewed as a failure of the institution to meet the needs of admitted students. Ultimately, these low retention rates could possibly reflect poorly on a university's reputation and impact the university's ability to appeal to prospective first-year students. In addition, low retention rates may dissuade prospective students from attending and harm the institution's standing in published ranking (e.g., US News and World Reports). For many universities, low retention rates may also reflect a substantial financial loss (Raisman, 2013).

Effects on the University

Many researchers are examining possible reasons for poor retention in higher education as well as effects of attrition on the university. For example, NCES (2012) surveyed students to identify specific reasons they chose to attend the universities they did, and reasons they elected to leave universities from which they did not graduate. Of the reported 16% of students that left their university in 2004, 31% reported that they left their institution due to financial reasons (NCES, 2012). According to a national report of high school seniors in the U.S. with postsecondary aspirations, 36% reported that low expenses were very important in selecting a college or university, 58% reported that academic reputation was very important to their decision, and 14% said racial/ethnic makeup was very important (NCES, 2012). According to

Raisman (2013), the top four reported reasons that students leave their university that accounted for 84% of students who left without graduating: (1) “college doesn’t care,” (2) “poor service and treatment,” (3) “not worth it,” (4) “not being able to schedule courses of interest.” This suggests several important areas that universities should target in order to increase attainment of first-year students.

Raisman (2013) also examined the effects of attrition by examining the average revenue lost by 1,699 for-profit universities, private universities, and public universities during the 2010-2011 academic years. As a result of attrition, these 1,669 universities lost a total estimated amount of 16.5 billion dollars. These losses ranged from \$10,548 to \$102,533,338, resulting in an average loss of \$9,910,811 per institution. Public colleges and universities averaged a loss of \$13,267,214 while private colleges and universities lost an estimated \$8,331,593 on average.

Factors Predicting Attrition

Differences in attrition rates have also been observed across demographic variables such as gender and ethnicity. Overall, female Caucasian college students have lower attrition rates than other demographics (NCES, 2012). A higher percentage of White males as well as both females and males of various ethnic backgrounds left a postsecondary institution in 2003-2004 without a degree or certification. In fact, Congress ordered the U.S. Department of Education to outline disparities in higher education and create policies to address race and gender gaps in higher education (Higher Education Opportunity Act, 2008). This Act includes many initiatives to help students from ethnic minority groups increase their chances of success, such as recommendations to improve student loans and increase knowledge of financial aid (Higher Education Opportunity Act, 2008).

Retention rates also vary by university type. A national survey done by the American College Testing officials (ACT, 2013) reports that 21.2% of students at traditional public universities (universities with incoming freshmen in the top 50% of their class) graduate in 4 years, 39% in 5 years, and 46% in 6 years. This rate is even lower when “liberal universities” (universities with incoming freshmen at the bottom 50% of their class) graduation rates are examined. This survey also showed that 18% of students graduating in 4 years, 30% in 5 years, and 36% in 6 years. Furthermore, only 64.9% of students in a BA/BS program in a public university continued with their education after their first year. These findings underscore the need to identify effective and cost-effective interventions to improve student retention at universities and colleges.

Interventions Aimed at Improving Retention

Some researchers have suggested potential ways in which retention rates can be improved and interventions that can be used. One study showed that student integration into campus social life was equally as essential as integrating into the academic aspects of a college or university in maintaining retention (Wilcox, Winn, & Fyvie-Gauld, 2006). This suggests that a student’s ability to establish compatible friends and contact emotion support during stressful situations may reduce the likelihood that the student will elect to leave the university without attaining a degree (Wilcox, Winn, & Fyvie-Gauld, 2006). One intervention aimed at reducing loneliness and increasing academic performance in first-year college students are support groups (Mattanah, Brookes, Brand, Quimby, & Ayers, 2012). Mattanah and colleagues conducted a nine-week social support group where 88 students assigned to 11 groups discussed various topics related to living a healthy college life-style. Some of these topics included handling peer pressure, balancing school and friends, making new friends, and talking about individuals’

values. The results showed that these types of support programs do, in fact, increase GPA and decrease self-reported measures of loneliness. This study did not, however, report impact on retention rates. Nevertheless, it seems at least plausible that the quality of life improvements noted could impact retention rates positively. Another group of researchers conducted a meta-analysis that analyzed universities that have reported results of interventions that have successfully targeted retention (Spradlin, Rutkowski, Burroughs, & Lang, 2010). The sample included 45 universities and found that among these universities, the types of interventions used that yielded an increase in retention were counseling and mentoring, learning communities, student-faculty interactions, transitions and orientation, academic support, tracking and early warning, coursework and instruction, and scholarships. However, none of the interventions described values clarification explicitly.

Western Michigan University's retention rates. Western Michigan University's 2008 retention rates show that 74% of students continued their education after their first year (Western Michigan University, 2013). In addition, according to an equation derived by Raisman (2013), WMU's 2008 projected financial loss from attrition is roughly \$34,054,434, given that 55% of WMU students graduate in six years and WMU has an attrition rate of 45% throughout those six years. Ultimately, WMU has the goal to achieve a first to second year retention rate of 80% by the year 2016. The University's 2006 retention plan states strategies to increase retention such as emphasizing participation in first year courses that teach college life skills, providing incentives for students to continue living on campus, and providing academic resources such as tutoring and career planning (Western Michigan University, n.d.). Furthermore, the Academic Affairs Strategic Plan of 2012 for WMU, among many other goals, highlights learner-centered education by emphasizing personal development of students, faculty, and staff (Western Michigan

University, 2013). This plan's primary focus is to create a "personalized undergraduate educational experience... that will be enhanced by further investments in existing programs that provide opportunities for individual or small-class instruction, such as undergraduate research, honors education, study abroad, and experiential learning" (p. 2). The plan also includes various goals that are meant to be consistent with their learner-centered education such as (1) retaining a diverse and outstanding undergraduate and graduate student body, (2) offering distinctive graduate programs, (3) producing creative research that addresses real world issues, (4) obtaining outside funding, (5) exhibiting pride in students' accomplishments, (6) helping the local community by applying students' talents.

One potential way to increase academic performance in a learner-centered way could be to incorporate simple interventions that allow students to clarify their values. This could allow students to become more aware of aspects they find to be important about their education and facilitate actions that are consistent with these aspects. Moreover, these interventions may have the added benefit of improving academic performance and creating a more meaningful and satisfying educational experiences for college students. The following section highlights the use of values clarification in educational settings.

Values clarification used for educational purposes. Kirshenbaum (1976) claimed that the first operational definition of values within education was articulated in the book *Values and Teaching* by Rath, Harmin, and Simon (1966). Although, among professionals, there was no consensus definition of the term "value" at that time, Rath and colleagues' (1966) offered a popular definition of that became widely known in the field of education (Lockwood, 1975). Rath and colleagues second edition (1978) defined values in terms of a seven step process by

which a person arrives at a valued belief, attitude activity, or feeling. Their definition is as follows:

We have reserved the term value for those individual beliefs, attitudes, activities, or feelings that satisfy the criteria of (1) having been freely chose, (2) having been chosen from among alternatives, (3) having been chosen after due reflection, (4) having been prized and cherished, (5) having been affirmed to others, (6) having been incorporated into actual behavior, and (7) having been repeated in one's life (p. 47).

For the purposes of this paper, we will distinguish between values themselves (i.e. the selected belief, attitude, activity or feeling) and "values clarification" (the multi-step process of arriving at one's values).

Raths and colleagues' (1978) conceptualization of values clarification was influenced by individuals' inability to make decisions due to pressure or confusion, which hindered their pursuit to live purposeful lives. Successfully clarifying individuals' values was thought to cultivate change in these indecisive and apathetic individuals' behaviors by bringing awareness to their life, nonjudgmentally accepting their values as well as other's values, continuing to reflect on values, and empowering people to self-direct their lives (Raths et al., 1978). Although Raths and colleagues intended their approach to be directly applicable to scholastic settings, many later critics have suggested that the values clarification exercises more closely resemble clinical interventions. These and other criticisms are described below.

Criticisms. Many contemporary authors criticized Raths and colleagues' approach and argued that values clarification was hedonistic (i.e., people are only worried about and interested in clarifying their own values, as opposed to those of their community), not operational (i.e., there are no specific or objective ways to measure values), and disregarded moralizing (i.e., does

not teach or clarify the difference of right and wrong) (Kirschenbaum, 1976; Lockwood, 1975). Lockwood (1975) specifically opposed Rath and colleagues' (1978) view of values clarification for three reasons: (1) its definition, (2) its characterization of effective treatment, and (3) its perspective on morality. Lockwood argued that the seven criteria disregarded the role of outside influences on people's values and the impossibility of acting on certain values. For example, if a priest that was raised in a religious family claims to value religion, his statement is suspect, since religion was presumably not freely chosen as a value, but learned through exposure to his parents' values. In addition, according to Rath and colleagues' (1978) definition, someone who values the conviction of rapist needs to act on that value. However, this person might not have the tools to convict people of rape, while still viewing the prosecution of the rapist as important. Another potential problem with Rath and colleagues' (1978) conceptualization of values is that the process of identifying a behavior as consistent or inconsistent with a given value is highly subjective. In addition, two people could assert the same value, but at the same time, have mutually conflicting actions. For instance, someone in a Western culture might claim to value physical appearance and therefore try to get a tan. On the other hand, someone in an Eastern culture who claims to value physical appearance might avoid getting a tan or even use products to whiten his or her face. The definition of physical appearance depends on each individual. This conflict makes defining values and related behaviors difficult (Lockwood, 1975).

Lockwood (1975) further argued that the values clarification exercises described by Rath and colleagues (1966) are too similar to client-centered therapy due to the fact that teachers using values clarification are encouraged to be non-judgmental and unconditionally accept all students' values. Lockwood explained that many teachers protested the idea that values clarification was therapeutic because "therapy was inappropriate for the problems they

[were] treating” (p. 45). As explained by Lockwood (1975), Raths and colleagues’ (1966) specifically believed that values clarification was more beneficial for individuals who were confused as to what their values were rather than individuals who were “emotional confused.” In addition, they believed that values clarification could actually cause more harm than benefit to individuals with emotional disturbances. Lockwood reasoned that Raths and colleagues’ (1966) values clarification was very similar to client-centered therapy and therefore targeted similar symptoms exhibited by individuals. He further suggested ways in which values clarification exercises are similar to client-centered therapy such as the conditions which produce the need for treatment (i.e., conflict in our culture makes living a satisfying life difficult), the outcomes of successful treatment (i.e., individuals freely choosing their values allows for their values to be congruent with their behaviors), key aspects of the treatment process (i.e., a nonjudgmental and trusting atmosphere), and the role of the therapist (i.e., being nonjudgmental and facilitating the process).

The last point Lockwood (1975) argued is that values clarification should not be exempt from moralization. According to Raths and colleagues definitions of values, everyone’s values were thought to be equally valid and important. For example, Hitler and Gandhi both have equally valid values. Not incorporating any moralization raises serious potential ethical concerns such as where or when to draw a line when the values of a student conflict with the values of a teacher or clinician.

Kirschenbaum (1976) wrote about common misconceptions of values clarification and the need to elaborate further on Raths and colleagues’ (1978) approach. He refuted Lockwood’s argument by explaining the issues values clarification addresses and ways in which the values clarification process should be expanded and improved. Values clarification emerged in the

educational field in an effort to educate youth about many areas of life (e.g., gender roles, love, health, race, to name a few) in a way that allowed youth to form their own opinions and decisions without a substantial influence from society (Kirschenbaum, 1976). Kirschenbaum (1976) argued that society's impact on youth is not necessarily negative, but that there are too many contradicting agents that could influence youth which are likely to confuse their values clarification process, thus making the ability to identify ways to live a valued life difficult. For example, a teacher could encourage a child to pursue a career in engineering whereas that child's parents might encourage a child to join the family law business. That same child might also receive media messages and peer influence supporting a completely different values orientation. Said child may very well struggle to identify his or her unique values amid these multiple influences.

Kirschenbaum (1976) stated that values clarification is not meant to guarantee any outcomes besides increased awareness of one's values, but that clarifying values can possibly lead to positive outcomes in other domains. Kirschenbaum believed that the definition of a value would never be agreed upon due to the many aspects and processes involved in gaining values. Instead, he focused his attention on five specific processes he believed underlie values clarification. The first process he described was thinking, which involved critically and creatively considering how to make decisions consistent with one's values. This could include thinking about society as well as themselves and how their behaviors could facilitate desired societal changes. Moral reasoning skills can be extremely beneficial during this process; values clarification according to Kirschenbaum did not necessarily exempt moral reasoning. The second process he described was helping students form a stronger self-concept by creating awareness and acceptance of their feelings, which was meant to help children cope with issues to

ultimately help them understand their own values. A third process mentioned was decision making. Kirschenbaum (1976) stressed the importance of decision making and learning from the consequences of one's decisions. That is, he believed that goal setting skills and past experiences could help someone make a decision that would be more likely to yield consequences that were more closely aligned with one's values. A fourth process he described was acting. He expanded on this concept by adding the idea of not only acting repeatedly in ways consistent with our values, but also by acting skillfully. Last, he stated the importance of communication and the development of values as an ongoing process that is in fact influenced by outside sources such as social interaction. He stressed the importance of sending clear messages to others with respect to our own needs and the importance of explaining our thoughts and feelings to have a clarifying effect. According to Kirschenbaum, this helped individuals understand responses to public and private events.

Kirshenbaum also offered a solution to conflict resolution and the issue of moralization mentioned by Lockwood (1975). Kirschenbaum (1976) argued that conflicting values could be resolved in multiple ways. One way is to make a decision on which side to stand on. Another way is to take a contextual approach and decide on a satisfying solution that incorporates a majority of the desired values for that specific situation. Kirschenbaum also responded to Lockwood's (1975) claim that values clarification exempts moralization; Kirschenbaum reiterated that teachers should attempt not to impose specific values onto students. Rather, teachers should attempt to teach skills such as the ones mentioned above (i.e., acting, thinking, choosing, communication, and feeling). In addition, values clarification only emphasizes the importance of choosing freely as opposed to choosing based on outside influences such as peer pressure. When answering Raths and colleagues' (1978) critique about how to address freely

chosen values, Kirschenbaum (1976) argued that values does not necessarily need to be separated entirely from social influences. He did argue, however, that clarifying values that benefit both the individual and his or her society are likely to help the individual lead a meaningful life.

Values in Contemporary Clinical Psychology

Three Contemporary Behavior Therapies

Along with the literature on values within educational settings, there is also rich literature on values and values clarification within behavior analysis and behavior therapy. Values have been incorporated in several different contemporary behavior therapy approaches, particularly behavioral activation (see: Kanter, Manos, Bowe, Baruch, Busch, & Rusch, 2010), Dialectical Behavior Therapy (Linehan, 1993a, 1993b), and Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 1999).

Behavioral Activation. Behavioral activation (BA) is an evidence-based treatment used for depression is based on results that showed the relationship between mood and engagement with pleasant activities (see: Kanter et al., 2010). Specifically, individuals who are deprived of reinforcement are less likely to engage in pleasant activities and more likely to exhibit symptoms of depression (MacPhillamy & Lewinsohn, 1974). That is, individuals who no longer engage in pleasant activities, no longer have the opportunity to receive the reinforcement from that activity. For example, if someone who enjoys physical activity becomes sick and bed-ridden, then that individual might not have the ability to receive reinforcement from physical activity. Therapists providing BA help clients find ways to “activate” themselves. That is, therapists will assist clients in finding reinforcing activities. Modern BA treatments, such as the manual written by Lejuez, Hopko, and Hopko’s (2001), often incorporate values assessment based on Hayes,

Strosahl, and Wilson's (1999) conceptualization of Acceptance and Commitment Therapy. Lejuez and colleagues (2001) incorporated values assessment in order to facilitate the process of identifying reinforcing activities for clients to complete as part of their homework. This approach to behavioral activation assumes that activities that are more consistent with clients' values should provide the richest reinforcement and thus the greatest mitigation of depression symptoms. For instance, if a client highly values family, but is forced to relocate somewhere farther from his or her closest relatives, that person will contact less frequent reinforcement from family visits and may consequently experience symptoms of depression. The therapist will help the client think of activities, such as calling home to have a long conversation, that are consistent with the client's values related to family. Current BA treatment approaches are using values assessment to aid in clinicians' decisions of activation assignments for clients (such as Gaynor & Harris, 2008; Yusuke, 2012).

Furthermore, the incorporation of values in BA has allowed treatment for depression to be more easily adapted to use across different cultures, since values are defined on an individual basis (Santigano-Rivera et al., 2008). This values-based approach contrasts with some earlier iterations of BA, which simply included lists of putatively pleasant activities from which clients could select their homework assignments (see: Kanter et al., 2010). Presumably this latter approach would be less effective in cross-cultural settings, since the types of activities deemed pleasant and available in Philadelphia during the 1970s (see: Beck, Rush, Shaw & Emery, 1979), might differ from those available to someone in Japan in 2012 (Yusuke, 2012). Yusuke's (2012) study providing BA for a depressed Japanese male adult found that values assessment was an important component in therapy in order to modify depressed behavior and mood, and that values assessment helped the therapist tailor the treatment to the unique needs of the client.

Dialectical Behavior Therapy. Another contemporary therapy that incorporates values is dialectical behavior therapy (DBT; Linehan, 1993a, 1993b). DBT is a well-established treatment for borderline personality disorder (BPD) (see Robins & Chapman, 2004 for a review). While values are not as heavily addressed as in some behavioral activation protocols, DBT incorporates values into a couple of the interpersonal effectiveness skills taught to clients during therapy. One skill is a guideline for maintaining one's self-respect. FAST stands for being *Fair* to oneself and to other people, avoiding excessive or unnecessary *Apologies*, *Stick[ing]* to one's values, and being *Truthful* (Linehan, 1993b). In a component analysis of DBT skills training, the authors asks individuals to rate each of the 27 skills based on effectiveness after completing six months of DBT (Dewe & Karwitz, 2007). The FAST skills was ranked as the fifth most useful skill, according to the DBT completers' reports (Dewe & Karwitz, 2007), suggesting that adherence to values is perceived as an important component of treatment for DBT consumers. Values are also incorporated in the skill titled "Building Positive Emotions" (Linehan, 1993b, 2009). This skill is intended to reduce depression and improve quality of life through an activity scheduling procedure. As originally described (Linehan, 1993b), this skill simply involved scheduling pleasant events, and identifying important long-term goals to work towards. However, a more recent iteration (Linehan, 2009), presented in workshops with accompanying handouts for clients, also includes a values clarification exercise very similar to that used in ACT (Hayes, Strosahl, & Wilson, 1999). However, this version of the skill has not yet been published outside of workshop handouts.

Acceptance and Commitment Therapy. A third contemporary therapy that incorporates values is Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999). ACT is considered to be client-centered due to the fact that the client's values are what direct the

course of therapy (Wilson & Murrell, 2004). ACT focuses primarily on a process that contributes to human adaptability called psychological flexibility. Psychological flexibility is a comprehensive model of human functioning and behavior change that takes into account six different components (acceptance, flexible attention to the present moment, values, committed action, “self-as-context,” and “cognitive diffusion”) that make up two core processes (i.e., commitment and behavioral activation and mindfulness and acceptance) (Hayes, Strosahl, & Wilson, 1999). This model focuses on changing people’s relationships to their private experiences (e.g., thoughts and emotions) and encourages value-based actions (Levin, Hildebrandt, Lillis, & Hayes, 2012). The principle of valued action (Hayes, Strosahl, & Wilson, 2012) holds that consistency between one’s behaviors and values is what makes life the most meaningful (Hayes, Strosahl, & Wilson, 1999). Values are thought to be freely chosen or personal choices of clients that allow clients to have a sense of ownership over their actions (Hayes, Strosahl, & Wilson, 1999). In addition, clients’ values are dynamic and evolving as their behavior changes and as they develop multiple identities. Engagement in behaviors consistent with one’s values is also thought to be intrinsically reinforcing (Hayes, Strosahl, & Wilson, 1999). Although ACT incorporates multiple treatment components and constructs for creating a dynamic case conceptualization, the ultimate goal of the protocol is to facilitate value-consistent actions and decrease maladaptive coping strategies aimed toward controlling internal events. The core principles of ACT are incorporated in the acronym ACT, *Accept* your reactions in the present, *Choose* a valued direction, and *Take action* (Hayes, Strosahl, & Wilson, 1999).

Issues and Implications of Addressing Client Values

Clinical psychologists are noticing similar issues as the educational researcher noticed in regards to values clarification. In addition, based on the above information about values in

contemporary behavior therapies, values clarification could be considered an important aspect of psychotherapy. However, the ethicality of incorporating values into psychotherapy has been questioned by Bonow and Follette (2009), among others. To address this question, Bonow and Follette (2009) defined values as behaviors or behavioral processes, arguing that change in values is inevitable as a client's repertoire develops during therapy. Therefore, facilitating development in a client's values may be considered part of the behavior change process inherent in all therapeutic processes (Bonow & Follette, 2009). The following section describes Bonow and Follette's conceptualization of values, as well as some issues that the authors believe still needs to be addressed with regards to the definitions.

Valuing

Bonow and Follette (2009) argue that valuing is a behavior because one's behaviors reflect what one values. For instance, if someone attends church, then that individual values church. However, similar to Raths and colleagues' (1978) definition of value clarification, values must be incorporated into actual behavior (Bonow & Follette, 2009). That is, someone who claims to value attending church, but never attends could be said to not actually value church attendance. These brings up the same issue originally raised by Lockwood (1975), that an individual can still have certain values, but be unable to act on these values. For example, someone may value attending church, but for whatever reason has been unable to attend church (e.g., the individual is hospitalized or the individual is vacationing in an unfamiliar area and unable to find a church in that area). To account for this, Bonow and Follette (2009) conceptualized values more as dynamic and ongoing activities rather than fixed entities. That is values can change in a moment depending on the situation. For example, an individual may values food when eating food and then value watching television when watching television.

However, looking at all values as dynamic can contradict the underpinnings of BA. As mentioned above, BA is largely based on the fact that mood is related with engagement in pleasant activities (see: Kanter, Manos, Bowe, Baruch, Busch, & Rusch, 2010), and often values assessment is used to target an increased engagement in specific activities. In other words, partaking in activities that are consistent with one's values can treat depression. If someone is depressed and not engaging in activities that are consistent with his or her values, this does not mean that the person does not hold those values. Rather, this individual might be unaware of these values or when given the opportunity to engage in a valued activity fails to do so. The act of valuing should still incorporate values that are static as well as values that are more dynamic.

Functional Values

Behavior analysts also look at values in terms of variables that are maintaining an individual's behavior (Bonow & Follette, 2009). For example, someone who claims to value a college education might actually value receiving letter grades and praise from professors. Functional values are described similarly to motivating operations because functional values control the rates of responding. As cited by Bonow and Follette (2009), Skinner (1971) stated that reinforcement from a behavior was heavily related to values. The same is true with motivating operations. The reinforcement that follows a behavior is directly related to the motivating operation (e.g., someone whose motivating operation is water deprivation will likely engage in behavior that contacts water as a reinforcer). Bonow and Follette (2009) argue that a motivating operation would change if an organism is deprived or satiated of a certain type of reinforcement (e.g., a rat that is deprived of food will find food highly reinforcing whereas a rat that is satiated on food will not find food as reinforcing). A value, therefore, can be conceptualized as analogous to a motivating operation. If, for example, a person values family,

that person is more likely to engage in behaviors related to spending quality time with his or her parents, even when there is no extrinsic reinforcement for doing so. Simply spending time with family members could function as a reinforcer under these conditions, separate from extrinsic reinforcers such as having a meal.

Another interesting point raised by Bonow and Follette (2009) is Herrnsteing's (1961) matching law, which states that when multiple concurrent-interval schedules are present, the rate of responding of the organism will match the rate of reinforcement (see: Pierce & Cheney, 2008). In a general sense, behavior will be distributed among alternative sources of reinforcement to equal (or match) the reinforcement presented in these alternatives. The authors argue that these experimental findings can relate to values in the human species. That is, humans' relative frequency of activities will equal the relative distribution of reinforcement in a certain valued domain. For example, if a certain domain is rich with reinforcement such as an individual's community, then that individual is likely to engage in a large number of activities related to community (i.e., the matching law). However, if another valued domain in life becomes rich with reinforcement such as work, then that individual will distribute his or her activities to match the rate of reinforcement available within each valued domain. In this case, an individual's values could potentially change from valuing community over work to valuing work over community (Bonow & Follette, 2009). However, certain circumstances need to be addressed such as when an individual engages in a large number of activities in a valued domain, yet receives little reinforcement. For example, a graduate student might be investing an ample amount of time toward school and research, but not receiving much immediate reinforcement in the domain of education simply because the outcomes of these activities are distal, rather than proximal. In this case, the student may only contact reinforcement long after engaging in

relevant behavior (e.g. learning that a research project has been accepted for publication six months after the project is completed and submitted for review). When addressing values, clinical behavior analysts should account for situations like the above, where the rate of reinforcement might not always match the rate of behavior due to long delays in reinforcement.

Statements of Values

Statements, or verbal behavior, of values come in two forms: evaluative statements and prescriptive statements (Bonow & Follette, 2009). Evaluative statements are used when one is stating a preference (e.g., Cherry Coke is good), whereas prescriptive statements are used when stating a plan of action (e.g., these statements are used for tacts of valuing and functional valuing as well as the relationship between the two (Bonow & Follette, 2009). According to Pierce and Cheney (2008) “tacting is defined as a class of verbal operants whose form is regulated by nonverbal discriminative stimuli . . . and maintained by generalized conditioned reinforcement from the verbal community” (p. 271). In other words, tacting can be thought of as identifying or referencing something (e.g., an event, an emotion, a behavior) that is happening in the world that is not mediated through another person’s response. An evaluative statement can be a tact of valuing (behaving) or a tact of one’s functional values (maintaining variables), meaning that individuals will identify and label the reinforcer and punishers operating in the environment (functional values) and then state their frequency of behaviors with regards to that value (valuing) (Bonow & Follette, 2009). This helps individuals make prescriptive statements that identify the relationship between functional values and valuing in order to understand ways to behave and rules to follow in order to come in contact with reinforcement (Bonow & Follette, 2009). Bonow and Follette (2009) continue to say that teaching individuals to identify these relationships, the contingencies that operate on the environment, aid in the process of developing

values. Similarly to Kirshenbaum's (1976) explanation that teachers merely help to promote positive values, therapists can try to help clarify the consequences of certain behaviors to promote specific values and behaviors that create more meaning in individuals' lives.

Research on Values

Values exploration exercises have been used for many purposes including reducing the racial achievement gap (Cohen, Garcia, Apfel, Maser, 2006) and increasing acceptance of health related issues (Harris & Napper, 2005). Cohen and colleagues (2006) used a brief in-class writing assignment to reduce psychological threat of negatively stereotyped. This brief exercise asked participants about their values. The participants were given a list of values and participants in the experimental group were asked to pick one to three of their most important values while the participants in the control group were asked to indicate one to three of their least important values. Then, the experimental group was asked to describe why their top values were important to them, whereas the control group were asked to describe how their least important values could be important to someone else. The results showed that when compared to the control group, minorities (i.e., African Americans) in the experimental group received higher grades at the end of the academic term. However, majority participants (i.e., European Americans) did not show significant effects from the brief exercise (Cohen et al., 2006). This suggests that small and simple exercises that incorporate values can make a significant impact on academic performance.

Another study incorporated an exercise centered on values in order to increase the likelihood that women at a higher risk of breast cancer would take more pre-cautions in activities that would increase the risk of developing breast cancer issues (Harris & Napper, 2005). Specifically, the authors chose to focus on excessive drinking as a high risk of developing breast cancer, and targeted participants' rate of consumption of alcohol. Participants were randomly assigned to one

of two groups. One group received the values exercise as well as health education on the relationship between alcohol consumption and breast cancer, and the other group only received the health education. Both groups also received questionnaires asking about their perceived risk of developing breast cancer and questionnaires about their intended alcohol consumption. The results showed that the group that received the values exercise was more likely to be persuaded by the health education and reduce their future alcohol consumption. These results suggest that values clarification can increase the likelihood one intends to change their behaviors.

Values clarification can be used to increase performance in many domains of life as shown by the above research. Although these research studies incorporate values to improve performance, little research has addressed the mechanism or mechanisms through which values clarification exercises impact outcomes, particularly academic achievement. In addition, little research has addressed the types of values clarification exercise that are the most effective and many of these interventions integrate goal setting, making it difficult to identify the unique contribution of values clarification.

A popular research area related to values that take a more contemporary and behavioral perspective is research related to the outcomes and treatment processes of ACT. Levin and colleagues (2012) recently conducted a meta-analysis of interventions that employed the psychological flexibility model typical of ACT. This meta-analysis found that interventions based on the psychology flexibility model, which also tended to include personalized values clarification exercises consistent with ACT, yielded a larger effect sizes than intervention approaches not based on the psychological flexibility model. The outcomes measured in this study included a variety of changes in behavior such as willingly engaging in difficult tasks, academic performance, memory tests, and cigarette smoking. Additional outcomes included

frequency and intensity of negative thoughts and emotions as well as positive outcomes such as motivation and attitudes (Levin, et al., 2012). This study supports the use of psychological flexibility components in future interventions (Levin, et al., 2012), including the pilot study described later in this paper.

Another study by Chase and colleagues (2013) used an online Acceptance and Commitment Therapy (see: Hayes, Strosahl & Wilson, 1999)-based values training and goal-setting program. The program defined values using metaphors and audio clips and then asked participants to answer ten questions about values based on the information that had been provided for them. The researchers' intention was to increase academic performance among college students. When compared to a waitlisted group and a group that only received the goals program, the group that received the values and goals program received higher GPAs and had higher retention rates. However, the authors suggest more research should be done on why values exploration exercises appear to be successful in cultivating academic success.

Given the demonstrated efficacy of interventions employing the psychological flexibility model, there is a need for future research to identify the unique contributions of individual elements of the model. The remainder of this paper will focus on possible areas for future research on the efficacy of values-clarification exercises (an element of the psychological flexibility model) on a variety of outcome variables, but with a specific focus on the use of values clarification within academic contexts to facilitate optimal outcomes for students in areas like retention, academic performance, and satisfaction with one's college experience.

Directions for Future research

One study that would be of practical and conceptual interest would be administering a values clarification exercise intended to improve retention among college students. This values

clarification exercise could educate students about the concept of values similarly to the approach taken by Chase and colleagues (2013), possibly including the use videos and quizzes to ensure that participants understand values before completing the exercise. While this exercise should primarily focus on educational values, this should not be the only focus. Social support can also increase persistence in educational settings as mentioned above when referencing Mattanah and colleagues (2012) intervention using social support groups. Values clarification that includes multiple domains of life such as university activity and social activity could increase the likelihood that students will successfully adapt to the college setting. Moreover, this values clarification exercise can exclude goal-setting exercises in order to determine if values clarification alone can improve academic performance. Such a study could also consist of a four-group design in which one group completes a values clarification exercises with goal setting, one group completes values clarification alone, a third group completes goal setting only, and a fourth group receives a control intervention (perhaps completing personality measures or some other activity intended to increase awareness of the self, and controlling for time spent participating, but which does not explicitly target goal setting or values clarification).

This values clarification exercise should be administered and evaluated in a systematic way. It should be administered during the beginning of the academic semester in order to show its effects over time. Furthermore, having only one session for each participant to complete the values clarification exercise would allow for a greater sample size in a short amount of time than an approach using multiple sessions in which dropout rates of study participation are more likely. To measure the effects of the values clarification exercise, participants' GPA can be compared from the semester before completing a values clarification exercise and their GPA at the end of that semester. In addition, GPA of participants who complete the values clarification exercise

could be compared to a variety of control groups, including no intervention, goal setting, a combination of goal setting and values clarification, and an alternative activity intended to control for the time spent completing the exercises and for any expectancies that students might have. In this way, the unique effects of values clarification and goal setting could be elucidated. Retention rates can also be reported by seeing how many students are registered for the following semester. A supplemental way of analyzing retention could be an expense and cost approach. The cost of administering values clarification exercises to students could be determined (e.g., the cost of printing paper, time spent by instructors to administer the intervention and the like) and compared to the money lost due to the attrition of the control group as well as the money gained due to the retention of the experimental group.

As suggested by Chase and colleagues (2012), another interesting component to consider adding to future research would be examining reasons why values clarification exercises can foster academic success as well as the level of awareness people have about their values and behaviors. Reasons why values clarification could foster academic success could be determined by administering an end of the semester survey asking participants questions about the courses they have registered for, their social interactions, and their level of activity on the university's campus. In addition, awareness of one's values could be analyzed by asking participants open ended and free-response questions about their activities and their values. Participants who write more and include more related terms to values could be considered as having a greater awareness of their values.

If values clarification exercises are able to improve academic performance and retention rates, conceptually, such a finding may suggest that simply increasing the salience of values can improve performance and engagement with academic activities. Practically, this finding would

also suggest that teachers and professors could easily include a values clarification exercise in their syllabus. The following section is a pilot study done to examine some potential effects of values clarification exercises in college students.

The Present Pilot Study

As an example of a study elucidating the role of values clarification in fostering academic success, this section of the paper will describe a small pilot study conducted by the authors. This study is ongoing and has only collected data on 8 participants, and so should be considered only as a proof of concept for future work in this area of research. However, even with such a small sample size, it did generate some interesting data, albeit tentative in nature. It should be emphasized that the methods of this study were largely governed by pragmatic variables, and that the authors are interested in pursuing research in this content area on a much larger scale in the future.

The present study sought to build upon previous research (e.g. Chase et al., 2013) to determine if values exploration alone (i.e., without explicit goal-setting) can foster academic success. For the purpose of the present study academic success was defined as the grades students receive on psychology exams and reported time spent on academic tasks. The study also attempted to examine the effects of a values clarification exercise (based on the one employed by Chase et al., 2013). It attempted to determine if such an exercise would increase the participants' ratings of consistency between their educational values and academic behaviors, as well as their academic performance. The present study was a randomized controlled experiment in which all participants were asked to self-report their academic behaviors, but only the experimental group was asked to complete a values clarification exercise.

Methods

Materials and Procedures

Research participants were recruited from lower level psychology courses at a university. Any student was eligible to participate as long as they were enrolled at the university and were of 18 years of age or older. However due to a possible conflict of interest, students whom the student investigator mentors were not eligible to participate in the study. After completing an informed consent, participants were randomly assigned to receive (n=4) or not receive (n=4) the values clarification exercise (four participants did not complete the study by the time the student investigator ran these statistics). This study consisted of three sessions with the first and second session being approximately one week apart and the second and third session being approximately two weeks apart.

Dependent Variables

Valued-Living-Questionnaire (VLQ; Wilson & Groom, 2002). During the first and third sessions, all participants completed the VLQ. The VLQ assesses the extent to which one is living consistently with one's values in everyday life. The VLQ includes ten different domains of life that people tend to value. These domains include: 1) family (other than parenting and intimate relations), 2) marriage/couples/intimate relations, 3) parenting, 4) friendship, 5) work, 6) education, 7) recreation, 8) spirituality, 9) citizenship, and 10) physical well-being. There are two parts of the VLQ. The first part asks about how important the value is to the individual on a 10-point Likert scale where 1 means "not at all important" and 10 means "extremely important." The second part asks participants to rate the consistency between their values and their actions on a 10-point Likert scale with 1 being "not at all consistent" and 10 being "extremely consistent." Both of these sections ask the individual to evaluate importance and consistency based on the past week. The reliability of the VLQ has been shown to be good (Wilson, Sandoz,

Kitchens, & Roberts; 2010). Specifically, the internal consistency of the education/training domain's item-total correlations were reported as "good" (Cronbach's alphas of .45 - .48) and the education/training domain for the test-retest reliability for importance (Pearson product-moment correlations of .77), consistency (Pearson product-moment correlations of .60), and composite score (Pearson product-moment correlations of .79) were shown to be good.

Quality of Life Scale (QOLS; Flanagan, 1978; Burckhardt & Anderson, 2003). During the first and third sessions, all participants completed the QOLS. The QOLS consists of 16 items specifying a relationship or activity. Participants were asked to rate how satisfied they currently are for each item on a scale of "1" to "7", with "1" being *Terrible* and "7" being *Delighted*. The QOLS is valid when measuring the quality of life across different cultures and has a low to moderate correlation with disease and physical health measures (Burckhardt & Anderson, 2003).

Value of College Experience Questionnaire (VOCEQ). During the first and third sessions, all participants completed the VOCEQ. This scale was constructed by the student investigator and consists of a single question that asks participants to "rate the degree to which they feel their college experience is valuable," on a likert scale with "1" being not valuable at all and "10" being extremely valuable.

Reasons for Registering for Courses. This measure was given to all participants during the third session. This measure was constructed by the student investigators. This measure asks participants to list their registered courses for the following semesters and indicate reason(s) as to why they have chosen to register for each course. Participants are also asked to indicate if they registered for this course before or after their participation in this study. The reasons participants chose to register for courses will be interpreted and coded by the student investigators, although these have not yet been analyzed.

Academic Behavior Checklist. All participants recorded their academic behaviors during the time between the first and second session as well as the second and third session. The academic behavior checklist includes 15 academic behaviors (e.g., reading for class, answering questions in the back of the chapters, making note cards, making a concept map, writing a paper, editing a paper, making an outline, re-reading notes, re-writing notes, meeting with a tutor, meeting with a study group, meeting with a teacher, completing practice problems or practice tests, completing required homework assignments, and other). The participant were also asked to rate the importance of the activity on a 10 point Likert scale where 1 is “not at all important” and 10 is “extremely important.” Additionally, participants were asked to record the amount of time they spent engaging in the activity for the given week. This checklist was developed by the student investigator.

Self-report Psychology Exam Grades Questionnaire (SPEGQ). This questionnaire was given to all participants during the first, second, and third session. The SPEGQ was developed by the student investigators. This questionnaire asks participants to indicate the date, grade, and specific psychology course of their most recent psychology exam grades.

Independent Variables

Values Clarification Exercise (adapted from Chase et al., 2013). This was given to participants in the experimental group during the second session. The beginning of the values clarification exercise includes a brief explanation of values from an ACT perspective, taken from a goal setting and values training program created by Chase and colleagues (2013). This explanation was included to give participants a better understanding of values so they could more accurately reflect and answer questions concerning their values. In addition, the values clarification exercise will be similar to exercises used in past studies (e.g., Fein & Spencer, 1997;

Lehmiller, Law, & Tormala, 2010). Participants will be asked to rank 10 values in order of importance (family, intimate relations, parenting, friends/social life, work, education, fun, spirituality, citizenship/community life, physical self-care).

Personal Values Questionnaire II (PVQ; Blackledge & Ciarrochi, 2006). The PVQ was used as part of the values clarification exercise. For the purpose of this study only the section of the PVQ asking about education-schooling/personal growth and development was used. This questionnaire asked to write their education-schooling values and 9 questions about their values.

The Bull's-Eye Values Survey (BEVS; Lundgren, et al., 2006). For the purpose of this study BEVS was used and slightly reworded to ask participants to examine the barriers and obstacles in the way of their educational values rather than the barriers and obstacles in the way of their values in general.

Analysis

The researchers utilized a two-sided independent t-test with a significance level established a priori at $p < .05$. This statistical test was used to examine the main hypotheses that, after the implementation of the values clarification exercise, the experimental group may have higher academic success as well as higher ratings of consistency between their educational values and academic behaviors than the control group.

Preliminary Findings

The sample size for the study ($n=8$) was too small to make claims of significance. However, the researchers examined the hypotheses statistically to look for any potential trends in the data, as noted above.

Academic Performance

After the values clarification exercise was administered, the experimental group's average reported psychology exam grades were higher than the control group's average reported psychology exam grades. The experimental group's reported average (at the third session) was 83.25%, whereas control group's reported average was 72.75% ($p > .05$; $p = .255$). In addition, after the values clarification exercise was administered, the experimental group's average reported time spent engaging in academic tasks was lower than the control group's average. The control group reported an average of 1,214 minutes spent engaging in academic tasks, and the experimental group reported an average of 474 minutes ($p < .05$, $p = .003$).

Consistency Ratings

After the values clarification exercise was administered, the control group reported higher ratings of consistency between their educational values and academic behaviors than the experimental group. The experimental group reported an average rating of 8.5 and the control group an average of 9 ($p > .05$, $p = .267$).

Additional Findings

Due to the insufficient sample size, the researchers decided to further investigate the data. The researchers utilized a repeated measures t-test with a significance level established at a priori at $p < .05$. This statistical test was used to examine the change of experimental group's academic performance and consistency scores at baseline (session 1) and after implementation of the values clarification (session 3). The same was done with the control group, examining these differences between the first session and the third session. In addition, the importance ratings of both groups were analyzed.

Academic Performance

The experimental group's psychology exam scores increased from baseline (session 1) to after the implementation (session 3) of the values clarification exercise, whereas the control group's psychology exam scores decreased. The experimental group's average increased from 80% to 83.5% ($p > .05$, $p = .391$), and the control groups average decreased from 74% to 72% ($p > .05$, $p = .753$). In addition, the experimental group's reported average time engaged in academic tasks decreased after the implementation of the values clarification exercise, whereas the control group's increased. The experimental group's reported average decreased by 166 minutes (640 at session 1 and 474 at session 2; $p > .05$, $p = .098$). In contrast, the control group's reported average increased by 229 minutes (985 minutes at session 1 and 1,214 at session 2; $p > .05$, $p = .127$).

Consistency Ratings

Both the experimental group's and control group's ratings of consistency between their educational values and academic behaviors increased from session 1 to session 3. The experimental group's ratings increased by .25 (8.25 at session 1 and 8.5 at session 3). The control group's ratings increased by .75 (8.25 at session 1 and 9 at session 2).

Importance Rating

The importance rating of education during the third session between the control group and experimental group were also examined utilizing independent samples t-tests ($p < .05$, $p = .034$). Both groups' importance ratings of education increased from session 1 to session 3. The experimental group's ratings increased by .5 (7.75 at session 1 and 8.25 at session 3). The control group's rating increased by 1.5 (8.25 at session 1 and 9.75 at session 3).

Discussion

It should be emphasized that the current study should be considered as a pilot test only, and all findings should be considered preliminary, given the very small sample sizes collected thus far. The purpose of the study was to investigate preliminary results of the effects of a values clarification exercise on college students in the absence of goal setting. Specifically, the researchers were looking at (1) academic success (i.e., time spent engaged in academic tasks and psychology exam scores) and (2) ratings of consistency between participants' educational values and academic behaviors. The preliminary results showed that after the implementation of the values clarification exercise: (1) the experimental group reported spending less time engaging in academic tasks compared to the control group, (2) the experimental group reported higher psychology exam grades than the control group, and (3) the control group's consistency ratings were higher than the experimental group. Further, preliminary analysis of the data revealed that the (1) the experimental group's psychology exam scores increased from baseline, whereas the control group's decreased; (2) the experimental group's reported average time engaged in academic tasks decreased after the implementation of the values clarification exercise, whereas the control group's increased; (3) both the experimental group's and control group's ratings of consistency between their educational values and academic behaviors increased from session 1 to session 3; (4) Both groups' importance rating of education increased from session 1 to session 3. Further research is necessary to make confident claims regarding any of these findings, but potential interpretations are described, as well as future research related to these trends and the limitations of the study.

Limitations

The present study had several limitations. First and foremost, the insufficient sample size was a huge limitation, preventing meaningful analyses of any results. The interpretation of the

results should therefore be considered tentative at best. Second, the study relied heavily on self-report questionnaires and self-report measures of behavior, with the exception of psychology exam grades. This was especially a concern with respect to the behavior checklist, where participants were asked to self-record their academic behaviors over the course of the study. Several participants lost this checklist, were given new checklists, and then asked to report the amount of time they had studied within the past week or two weeks depending on the session.

In addition, difficulty determining the timing of events was a limitation of this study. In particular, determining if the time spent studying a given week was directly related to the grade in their psychology course was difficult. For example, participants might have reported engaging in 500 minutes of academic activities during the first week, but the grades they reported could have been grades as a result of their studying weeks before participating in the study. To counter this, the researchers recruited from classes with frequent tests and quizzes. Furthermore, only exam grades from psychology courses were recorded which is unlikely to provide an overall estimate of participants' academic performance. For example, an individual could be receiving Cs in a psychology course, but As in other courses. This could be especially true after the administration of a values clarification exercise to someone who is not a psychology major that realizes other courses are more important and therefore spends more time studying for those courses. In addition, at certain times of the semester students are likely to study more such as mid-term week or finals week. The researchers initially planned to solve these issues by examining the GPA of each participant at the end of the semester and using participants' GPA of the previous semester as baseline. Unfortunately, due to time constraints, semester by semester GPAs have not yet been examined for this pilot study. Future research, however, should use GPA to measure academic performance. At Western Michigan University and presumably at

other universities, student GPAs can be obtained by asking participants to complete a release form and subsequently obtaining students' grades directly from the university registrar.

Last, a major limitation of this study could be the values clarification exercise itself. While the student investigator created values clarification exercise to target educational values study based on the values clarification training and online goal-setting program developed by Chase and colleagues (2013), the exercise used in the present study was far less interactive than that used by Chase and colleagues. It is possible that participants did not thoroughly read the introduction of the exercise used, or understand the introduction when the definition and concept values were explained. Future research should make values clarification exercises more interactive and educational such as Chase et al. (2010) where participants were educated on values and required to pass a brief quiz in order to continue.

Interpretations and Future Research

One interesting trend discovered through the present study was that the experimental group's consistency rating increased while, at the same time, their engagement in academic activities decreased and their psychology grades increased. This finding is counterintuitive with regards to the clinical behavior analyst's definition of functional values (i.e., the functional consequences that maintain behavior), specifically with regards to the idea that our values (i.e., behaviors) change based on the relative rate of reinforcement provided in each life domain (Bonow & Follette, 2009). Theoretically, the participants should have been receiving more reinforcement in the life domain of education if they were receiving higher grades and therefore should have been engaging more in academic tasks. Future research could be done to examine the matching law in relation to the reinforcement individuals receive in domains of life that they value. One way this could be done more effectively is by single-subject designs as suggested by

Caron (2013). Moreover, these findings address the question of which behaviors should be considered “consistent with one’s values,” for research purposes. In this case, participants rating of consistency increased when their grade increase and their studying behavior decreased. It is possible that time spent engaging in academic behaviors does not affect how consistent one feels with their values, but instead what does affect one’s perceived consistency is the reinforcement being offered from that domain. Again, however, these findings must be interpreted with caution, given the very small sample sizes of the present study.

Another striking set of findings consisted of the high ratings of importance found in this population. Wilson & Murrell (2004) offer one reason for high importance ratings. They state that this could be due to excessive concerns about social acceptance based on the observation that, clinically, importance and consistency scores change with greater scrutiny. However, given that the population used for this study was college students, one would assume education would be a value most participants would find to be highly important. Again, it bears repeating that these findings are preliminary and based on very small sample sizes.

Furthermore, the increase of importance scores of both groups suggests that individuals’ values can become more important as a result of self-recording behaviors or values clarification exercises. Self-recording and values clarification interventions could be beneficial to populations with low ratings of importance scores. Some populations could be individuals with depression, victims of trauma, or individuals with substance abuse disorders. Increasing importance in these populations could be beneficial for the individuals’ psychological well-being. For instance, lower scores on importance scales was associated with suicidal ideation in veterans (Bahraini, Devore, Monteith, Forster, Bensen, Brenner; 2013) suggesting that individuals who struggle identifying importance with their values struggle to find reasons for living. According to Wilson and

Murrell (2004) these types of populations might have low importance scores related to certain domains of life because the individual is distancing them from that life domain because of a past experience that was negative and risk of re-experience a similar event. This would be interesting to explore in certain types of trauma such as sexual victimization. Future research might seek to examine if victims of sexual assault have little importance in the domain of interpersonal relationships because of the fear of re-experiencing the trauma.

Another interesting trend was that the experimental group had a lower rating of consistency and importance compared to the control group. One effect of values clarification could be that the experimental group became more mindful of their values, and therefore were more critical of their behaviors in relation to their values. Another hypothesis of Wilson and Murrell (2004) is that clients usually uncritically assume they are doing “just fine,” with respect to consistency between values and behavior, until they are asked to further examine their values in a mindful way. Future research should be done to examine this, potentially by administering mindfulness questionnaires prior to and after the implementation of a values clarification exercise.

Last, the difference in grades within groups was not very significant in terms of clinical significance. There are many reasons why this could have been the case. One particular possibility is that this values clarification exercise did not incorporate any goal setting. Goal setting could be a necessary feature for significant behavior change. Future research should continue to examine the effects of values clarification alone versus the effects of goals alone on academic performance.

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